

6th Semester Notes of B.sc In hotel and Hospitality Administration

ARABIC

Arabic food refers to the food of the Arabian Peninsula, the largest country being Saudi Arabia, located in the southern region of the Middle East, which covers 2,149,700 sq. Km., which is three quarters of the Arabian peninsula. It is bordered by the Persian Gulf and U.A.E. to the east, Oman and Yemen to the south, the Red Sea to the west and Jordan, Iraq and Kuwait to the north.

Sunni Muslims make up ninety percent of Saudi Arabia's 25 million inhabitants, the majority is of tribal ancestry. The indigenous Bedouin tribe's food culture and the cultural influence of Islam forms the main characteristic of Arabian food.

The Bedouin tribe were nomadic herdsmen who lived in the deserts of Arabia and North Africa. The Bedouin existence depended on their herds and flocks. The camel was the supreme possession providing transport, milk for food and beverage, meat, hair, hides and dung for fuel. The camel allowed men to conquer the desert as they are capable of sustained travel in the desert. It was because of the camel these Arabs became the middle men in the caravan spice trade. These trade links brought spices and seasonings from Africa, India, Far East and Iraq and supplied them to the European countries.

The Bedouin food culture was based on the simple scarce food available in the region and their famed hospitality culture of honouring the guest. The main dish is centred on meat, chicken, fish or prawns, cooked in a sauce or roasted, baked or grilled, as in kebabs, with rice accompaniments. Simply dressed salads including peppery cress and cucumbers are common. Flat bread, curds and pickles accompany meats.

Islam, which had taken roots in the 6th century A.D., has dominated the Muslim culture by initiating strict culinary taboos which forbids ingesting alcohol, pork and blood. Lamb is the most popular meat and Khouzi the national dish is a whole spit roasted lamb stuffed with chicken, eggs and spiced rice.

In Muslim culture mixing of sexes is discouraged, men and women dine separately; males eat before women and children.

Dates are commonly used in sweet and savoury dishes.

Coffee is the main drink and has strong association with the renowned hospitality of the people. It is prepared from finely ground, well roasted beans and may be flavoured with cardamoms.

Originally, the Arabs of the Arabian Peninsula relied heavily on a diet of dates, wheat, barley, rice and meat, with little variety and heavy emphasis on yoghurt products, such as labneh (yoghurt without butterfat).

There is a strong emphasis on the following items in Arabian cuisine:

- Meat: lamb and chicken are the most used, with beef and camel used to a lesser degree. Other poultry is used in some regions, and in coastal areas, pork is completely prohibited—for Muslim Arabs, being both a cultural taboo and prohibited under Islamic law; many Christian Arabs also avoid pork as they have never acquired a taste for it, although this is often not the case in Lebanon, where cold cuts of ham are frequently consumed in Christian neighbourhoods.^[1]
- Dairy products: dairy products are widely used, especially yoghurt and white cheese. Butter and cream are also used extensively.
- Herbs and spices: mint and thyme (often in a mix called za'atar) are widely and almost universally used; spices are used much less than the Indian cuisine, but the amount and types generally varies from region to region. Some of the included herbs and spices are sesame, saffron, turmeric, garlic, cumin, cinnamon, and sumac. Spice mixtures include baharat.
- Beverages: hot beverages are used more than cold, coffee being on the top of the list, mostly in the Gulf countries. However, tea is also served in many Arab countries. In Egypt and Jordan, for instance, tea is a more important hot beverage than coffee.
- Grains: rice is the staple and is used for most dishes; wheat is the main source for bread. Bulgur and semolina are also used extensively.
- Legumes: lentils are widely used as well as fava beans and chickpeas (garbanzo beans).
- Vegetables and fruits: Arabic cuisine also favors vegetables such as cucumbers, eggplant (aubergine), zucchini (courgette), okra and onions, and fruits (primarily citrus) which are often used as seasonings for entrees. Olives as well as dates, figs and pomegranate are also widely used.
- Nuts: almonds, pine nuts, pistachios, and walnuts are often included.
- Greens: parsley and mint are popular as seasonings in many dishes, while spinach and mulukhiyah (leaves of plants of the Corchorus genus) are used in cooked dishes.
- Dressings and sauces: The most popular dressings include various combinations of olive oil, lemon juice, parsley, and/or garlic, and tahini (sesame paste). Labaneh, thinned yoghurt, is often seasoned with mint and onion or garlic, and served as a sauce with various dishes.

Notably, many of the same spices used in Arabian cuisine are also those emphasized in Indian cuisine. This is a result of heavy trading and historical ties between the two regions.

Culture

Essential to any cooking in the Arabian Peninsula is the concept of hospitality and generosity. Meals are generally large family affairs, with much sharing and a great deal of warmth over the dinner table. Formal dinners and celebrations generally involve large quantities of lamb, and every occasion entails large quantities of Arabic coffee. In an average Gulf Arab

state household, a visitor might expect a dinner consisting of a very large platter, shared commonly, with a vast amount of rice, incorporating lamb or chicken, or both, as separate dishes, with various stewed vegetables, heavily spiced, sometimes with a tomato based sauce. Most likely there would be several other less hearty items on the side. Tea would certainly accompany the meal, as it is almost constantly consumed. Coffee would be included as well.

Structure of meals

There are two basic structures for meals in the Arab world, one regular and one specific for the month of Ramadan.

Breakfast

Cafés often offer croissants for breakfast. Breakfast is often a quick meal consisting of bread and dairy products with tea and sometimes with jam. The most used is labneh and cream. Labneh is served with olives, dried mint and drizzled with olive oil. Pastries such as manaqeesh, sfiha, fatayer and kahi are sometimes eaten for breakfast. Flat bread with olive oil and za'tar is also popular. Most Arab families also consume hummus and falafel with pita bread.

Lunch

Lunch is considered the main meal of the day and is traditionally eaten after the noon prayer. It is the meal for which the family comes together and, when entertaining, it is the meal of choice to invite guests to. Rarely do meals have different courses; however, salads and maza (an appetizer) are served as side dishes to the main meal. The latter usually consists of a portion of meat, poultry or fish, a portion of rice, lentil, bread or bagel and a portion of cooked vegetables in addition to the fresh ones with the maza and salad. The vegetables and meat are usually cooked together in a sauce. Drinks are not necessarily served with the food; however, there is a very wide variety of drinks such as shineena (or laban), Karakaden, Naque'e Al Zabib, Irq soos, Tamr Hindi as well as fruit juices. During the 20th century, carbonated beverages and fruit based drinks, sold by supermarkets, have also become very popular.

Dinner

Dinner is traditionally the lightest meal, although in modern times and due to changing lifestyles, dinner has become more important.

Ramadan meals

In addition to the two meals mentioned hereafter, during Ramadan sweets are consumed much more than usual; sweets and fresh fruits are served between these two meals. Although most sweets are made all year round such as knafeh, baklava and basbousa, some are made especially for Ramadan, such as Qatayef.

Futuur

Futuur (also called iftar, Afur in Somali) or fast-breaking, is the meal taken at dusk when the fast is over. The meal consists of three courses: first, an odd number of dates based on Islamic tradition. This is followed by a soup, the most popular being lentil soup, but a wide variety of soups such as chicken, oats, *freaka* (a soup made from a form of whole wheat and chicken broth), potato, maash and others are also offered. The third course is the main dish, usually eaten after an interval when Maghreb prayer is conducted. The main dish is mostly similar to lunch, except that cold drinks are also served.

Sahur

Sahar is the meal eaten just before the dawn when fasting must begin. It is eaten to help the person make it through the day with enough energy.

BREAD

The invention of leavened bread is attributed to the Egyptians. The Greeks baked on grids in an oven like structure. Romans cooked their bread in household ovens made of brick and earth. It was in the Middle Ages that the bakery trade began to develop, bread became very varied and many different kinds of bread were produced.

Definition: Bread is food made from flour and water dough with yeast, which is fermented, kneaded and baked in the oven. The action of yeast gives bread its characteristic texture and flavour.

Bread is the only food, which, like wine, is present on the table from start to finish of any meal; bread constitutes the traditional accompaniment to all dishes. It is also the basic ingredient in sandwiches, canapés, toasts, croutons & breadcrumbs. In addition to this it is used widely in the preparations of the other dishes like, soups, gazpacho & garlic soup, panadas, stuffing's & forcemeats, timbales, charlottes & pudding and even in sauces. Good bread must have a crisp crust, an attractive golden colour and as soft crumb. Growing stale too quickly is a sign of bad quality. Most bread should be served fresh but not hot. A daily intake of 300 gms provides 125gms carbohydrates 25gms proteins, 2 gms fat calcium, phosphorus, magnesium potassium and it gives 750 calories.

The baking/making of bread comprises of 3 main operations kneading fermentation and baking.

The following ingredients are necessary for bread making

1. Maida
2. Yeast
3. Sugar
4. Fat and
5. Salt

1. Refined flour or Maida

Only strong and not weak flour is used for making bread. Strong flour has reference to the character of flour. Wheat flour contains both soluble and insoluble proteins. Proteins along with other components join when water is added. When this occurs, two of the insoluble proteins namely glutenin and gliadin join in the presence of water forming a tough, somewhat rubbery material called gluten. Glutenin gives solidity to the product whilst gliadin is the binding imparting the soft, sticky character to gluten. The gluten of strong flour is tough, resists extension is capable of withstanding prolonged periods of fermentation without breaking down producing good loafs. Flour containing such gluten is capable of absorbing a high percentage of water.

Diastatic enzymes present in the wheat flour affect the gassing power of the flour. If flour is deficient in diastase the final proving of the bread will be unsatisfactory. On the other hand, if too much diastatic action occurs the bread will still be unsatisfactory having a strictly crumb.

SALT

Why salt is used in Bread making?

Bread made without salt is insipid and flavourless; therefore, salt makes bread palatable and appetizing. The quantity of salt needed is also the right quantity to exercise adequate control

over the speed of yeast action (1 Kg of flour is to 30 gm of salt) If too much salt is added the bread will be too salty for pleasant eating whilst there will also be slowing down of yeast action.

Dough with too little salt in them suffers because of the lack of control over yeast activity and fermentation, allowing the production of excessive acidity. Salt has a physical effect on the gluten of flour. In reasonable quantities, it strengthens gluten and increases its resistance to the general softening effects of fermentation. Too much salt will completely rob it of its power of holding gas.

If salt is not added at all, then the yeast in the dough will be able to consume excessive quantities of sugar during its uncontrolled speedy action during fermentation that there may be insufficient sugar left at baking time to give perfect crust colour.

Loaves made from dough containing too little salt will lack volume because the gluten has not been strengthened sufficiently. The weak gluten strands will break down giving crumbly bread with large holes in texture.

Dough made with rather too much salt will have toughened gluten, which will have been insufficiently ripened, producing bread of subnormal volume and with unsightly holes in the texture.

Yeast

Yeast is living micro organism, the one used for bread making is known as baker's yeast or scientifically as *Saccharomyces Cerevisiae*.

Like all living things yeast can only work well between certain temperatures. The ideal and optimum temp, for the working of yeast is between 78^o and 82^o F. It works steadily at 76^oF but rather too slowly. Above 84^oF the speed of fermentation is very great but fermentation of dough may be undesirable. Above 140^oF the proteins in yeast get coagulated, the cells cease to function and then die. Yeast grows better in a slightly acid medium.

Yeast may be stored in a refrigerator at 36 to 40^o F. If no refrigerator is available, remove from packet and press it into a clean, dry earthenware vessel. Stand the jar in cold water and cover with a piece of clean muslin the ends of which dip into water.

For fermentation to occur normally dough must be made at a suitable temperature. In very cold weather very hot water may be needed. But under no conditions should the water temperature be above 110⁰F.

If salt comes into direct contact with yeast in sufficient concentrations the yeast will be destroyed. This is because salt will deprive the yeast cells of its water. The salt should be dissolved in water separate from the yeast solution. When salt is approx 3% of the solution its effect on yeast is not deadly but merely restrictive.

After making dough at the right temperature it is essential to see that the dough retains that temperature during fermentation. If it becomes chilled yeast action will slow down. The dough should be protected from draught of air especially cold air. They should preferably be fermented in bowls, which are bad conductors of heat.

Fats

Fats used in small quantities, act as a gluten lubricant, the strands of which then slide over one another and so appear to extend more easily, and the dough ripens more readily. The crumb is made moister, is wither and more even in texture. Crust are thinner and more biscuit like owing to the shortening properties of fats, and the general build of the loaf is better. If fats are used in heavy quantities it causes bread to be clammy and alter its eating qualities.

The undesirable characteristics that would be apparent when using large quantities of fat can be counteracted by the use of milk powder. Milk powder imparts bloom to the crust, makes the crumb a delicate creamy yellow colour but makes the bread crumbly. Where both fat and milk are used the crumb is creamy, soft, and even in texture crusts are thin and short eating and the loaf volume very satisfactory.

SUGAR

There must be sufficient sugar in the dough at the final proving stage from which the yeast can generate gas. Sucrose or glucose may be added to dough if greater gassing powers are required. Therefore sugar is needed for final proving to give sufficient volume to the loaf and for caramelization on the crust of the bread during baking. The quantity of sugar used in dough

should be small. Sugar has a dispersing action on the gluten of flour and large quantities can completely destroy its tenacity and extensibility.

Bread Making

There are many satisfactory methods of making bread given below are details of each of the methods that may be employed for making bread

I Straight Dough Method

When the whole of the flour, yeast, salt, water yeast food and enriching materials are taken and, at one operation, amalgamated by hand or machine into dough, the method is called the straight dough method of bread making. It is the least complicate of all dough making processes. The greater the quantity of yeast the shorter the length of time the dough will require in which to reach maturity and vice-versa. Excellent bread can be made by suing extra yeast in a cool dough and adding a little extra salt. However to obtain good results it is not advisable to speed up fermentation by use of high temperature and a small quantity of salt.

II Delayed Salt Method

A simple but very effective variation of the straight dough process is the delayed salt method. In this the whole of the ingredients except the salt are mixed together to make the dough which is then allowed to ferment for approx 30 min the salt is then sieved over the surface of the dough and thoroughly mixed.

By this process stronger flour are ripened more quickly and extra flavour is produced in the bread. This is achieved because no salt is present for most of the fermentation period hence yeast works more rapidly as do acid forming bacteria present in the dough.

III FERMENT AND DOUGH

Ferment is a thin liqueur prepared at a suitable temp containing all the essential food that is required by yeast. It is generally prepared with only a portion of the water that must eventually be used to make the finished dough. All he yeast, yeast food and some of the flour are mixed in to the selected quantity of water and a period to time allowed to elapse during which the yeast

can set to work and reach an active, vigorous condition before it is called upon to undertake the more serious and difficult work of fermenting the whole of the flour. Ferment offers yeast a period to recuperate, so that when the remaining ingredients are added to make the dough it can get on with the heavier work efficiently. The ferment is usually allowed to work until it has risen up the vessel in which it is contained to the fullest limits of the extensibility of the gluten. When this point is reached and passed the gluten strands break and the mixture subsides. The ferment is then ready for dough making.

IV Sponge & Dough

A quarter of the amount of the total flour needed for the final dough is removed and mixed with sufficient water to make very a soft dough. Into this mixture a small quantity yeast and salt are mixed and allowed to ferment slowly over a long period. The time can be regulated by the amount of yeast used and the temperature at which the sponge is set. When the sponge has cradled the production of an increased army of yeast cells, the remaining ingredients are added and the dough is made.

V Flying sponge

Instead of making a sponge to lie for many hours a similar mixture can be prepared with larger quantities of yeast that are normal for straight dough process, and allowed to lie for an hour. They are referred to as flying sponges because it takes less time to prepare the dough.

VI No time dough method

In this method dough is not fermented in the usual manner. It is allowed to ferment for a short period so the twin function of fermentation i.e. production of gas and conditioning of gluten are achieved to some extent by increasing the amount of yeast and by vigorously beating the dough using mechanical dough mixers so that the dough becomes a little slack and warm. The dough is then shaped and directly deposited in bread moulds for final proving before they are baked. It is possible to get a good product using this method but the product has poor keeping quality and lacks aroma due to short fermentation time, the gluten and starch are not conditioned to hold moisture and there is no flavour because flavour producing bi-products of fermentation are absent because of increased quantity of yeast present. The bread may have a strong yeast flavour.

Staling of Bakery Products and Mold Infection

There are three ways in which bakery products stale. They are, Starch Retrogradation (firming of the crumb), getting infected by molds and rope; See Below.

In simple terms, staling of crumb (firming of crumb) is the process the starch molecules go through when they shrink upon cooling. Starch molecule consists of a very long chain of Carbon, Hydrogen and Oxygen that are stretched out when warm and feel soft. Upon cooling, the chain shrinks and thus become firm which is called staling. You have probably experienced that when a stale product is warmed, it becomes soft. The starch chain has stretched again. Upon cooling, it shrinks again and become firm.

Anti-Staling Ingredients:

1. Emulsifiers. For the past several years bakers used emulsifiers called bread softeners to produce bread that will remain soft for a longer period of time. It is added to the dough during mixing. Some of the more common ones are monoglycerides, calcium stearoyl lactylate, and sodium stearoyl lactylate. The softening action takes place after the bread is baked. Also, Potato bread will resist staling because potatoes act as anti-staling ingredients to some degree. Some anti-staling ingredients also perform as dough conditioners or dough strengtheners.

2. Enzymes. Enzyme manufacturers are hard at work on genetic engineering and protein engineering producing enzymes to extend the shelf life of bread many fold. In a paper presented at the 1999 American Society of Baking's Annual Convention, it was stated that some of these enzymes are available now. However, since every baker wants to have one better, enzyme manufacturers will continue to work on developing better ones. It was also stated that there is a lag time of between 2 and 3 years between the time a specific enzyme is identified and actually having it available for the baker to use.

Advantages of Using Enzymes instead of Chemicals. Since enzymes are produced from natural ingredients, they will find greater acceptance by the housewife than when chemicals are used.

3. Mold and Mold Inhibitors. Sanitation plays a very important role in preventing mold in bread. Mold spores do not survive baking temperatures. The interior of the loaf, when it comes out of

the oven is about 210 to 212 degrees F. which will destroy any mold spores which may be present in the dough. Therefore, bread and other bakery products can only be contaminated after they leave the oven.

Some of the more dangerous areas for mold contamination are storage rooms, and slicing machine blades which come in direct contact with the interior of the loaf where there is an abundant supply of food and moisture. Mold spores also thrive in dark places. You can extend the length of time that it takes bakery products to mold by several days by using Mold Inhibitors such as Calcium Propionate for yeast raised doughs and sodium propionate in chemically leavened products. Propionates are present in many foods, but in very small amounts. Swiss Cheese, however is an exception. For this reason, Swiss Cheese rarely molds, unless it is improperly developed. Propionates may be obtained by the oxidization of propyl alcohol, forming propionic acid. The propionic acid is in turn combined with other chemicals to form the well known Sodium and Calcium propionates sold under different Trades Names. Mold Inhibitors react as an alkaline in doughs, and since yeast doesn't like an alkaline condition, Mineral Yeast Foods containing monocalcium phosphate are added to the dough. Monocalcium Phosphate reacts as an acid in doughs therefore counter-acting the alkaline which is formed by the propionates. Also, vinegar can be used at the rate of about 1 pint per 100 pounds of flour. Inhibitors are called inhibitors, because not enough is used to kill the mold. They only retard the growth of molds. Bread will mold eventually if kept in a warm moist environment. The amounts of Calcium Propionates to use in bread varies with the climate, season of the year, or type of product. Dark Breads require more than White Breads. For average climates, 2.5 to 3.5 ounces are used per 100 pounds of flour in White Breads and 4.0 to 5.0 ounces are used in Dark Breads.

Types and Color of Molds. There are many different types of molds and they have different colors. Mold spores are practically everywhere, because they are very tiny and are carried in the air. They are so tiny that they can only be seen under a microscope. Mold Spores are like seeds that you plant in the garden. When they come in contact with the proper food, moisture and warmth, the spores produce mold plants which you can see with the naked eye.

Rope. Rope is a bread disease caused by the bacteria, *Bacillus mesentericus*. This disease breaks down the cells of the bread and leaves a sticky, pasty mass. When the crumb is pressed together,

and pulled apart, it will stretch into long, sticky, web-like strands. The product will have the odor of over-ripe cantalope. The rope bacteria are too small to see with the naked eye, but they can be seen with a microscope. The bacteria can be present in the ingredients, especially flour and yeast. Unlike mold, rope spores are not destroyed by baking temperatures. Calcium propionate, sodium diacetate or one pint of vinegar per 100 pounds of flour can be used in bread doughs to increase the shelf life of the product. If the bakery is contaminated, thorough cleaning with special chemicals will be necessary and/or the bakery may have to be steam cleaned.

External Bread Faults

Symptom	Causes
Crust too dark	<ul style="list-style-type: none"> - Oven temperature too high - Excessive milk or sugar. - Excessive baking time. - Over proofing.
Crust too light	<ul style="list-style-type: none"> - Oven temperature too low. - Insufficient milk or sugar. - Insufficient baking time. - Insufficient proofing. - Insufficient mixing.
Crust broken	<ul style="list-style-type: none"> - Insufficient proofing. - Insufficient liquid.
Crust too hard	<ul style="list-style-type: none"> - Oven temperature too high - Insufficient proofing. - Insufficient sugar or shortening. - Excessive steam. - Insufficient liquid. - Baking time too long.
Crust too soft	<ul style="list-style-type: none"> - Oven temperature too low - Excessive sugar/egg yolks/shortening. - Excessive oil/margarine as a wash. - Insufficient steam during baking. - Baking time too short or wrong bread machine setting.

Internal Bread Faults

Symptom	Causes
Coarse and irregular grain	<ul style="list-style-type: none"> - Improper mixing procedures. - Stiff batter. - Careless or poor depositing in the pans. - Oven too cool, (baked too slowly).
Dense grain	<ul style="list-style-type: none"> - Excessive liquid in the batter. - Improper mixing procedure.
Off-color breads	<ul style="list-style-type: none"> - Improper mixing procedure. - Oven too cool, (baked too slowly). - Unclean equipment.
If raisins, nuts or dried fruit sunk to the bottom	<ul style="list-style-type: none"> - Pieces of fruit were too large and too heavy. - Sugary syrup on the outside of the fruit was not washed off- causing the pieces of fruit to slide through the mixture as it heated. - Washed and dried fruit was not dusted with flour before being added to the mixture. - Bread mixture was over beaten or was too wet so it could not hold the fruit in place. - Oven temperature was too low, causing the mixture to melt before it set to hold the fruit in place.

General Bread Faults

Symptom	Causes
Batter over-flowed the pans	<ul style="list-style-type: none"> - Wrong adjustments to recipes (too much liquid, flour etc.) - Wrong size pan used. Mixture should fill 2/3 of pan.
Poor flavor	<ul style="list-style-type: none"> - Improper mixing procedure. - Improper cleaning and greasing of the pans. - Faulty baking conditions. - Improper cleaning of the equipment.
Breads too tough	<ul style="list-style-type: none"> - Excessive mixing. - Batter too stiff (insufficient water). - Batter too thin (excessive water).

Lacks body/structure	<ul style="list-style-type: none"> - Excessive mixing - Insufficient liquid.
Dries out too soon	<ul style="list-style-type: none"> - Excessive baking time. - Insufficient liquid. - Improper mixing procedures. - Cooled in a drafty location.

CUISINE OF SPAIN AND PORTUGAL

Situated in southwest Europe is the Iberian Peninsula which juts out from France and the Pyrenees mountain range into the waters of the Mediterranean Sea and the Atlantic Ocean. It lies between 10°W to 4°E longitude and 36°N to 43°N latitude and includes two countries Spain and Portugal with Spain covering more than three quarters of its landmass. The proximity of the two countries with their large coastline regions and overlapping historical influences, bind their culinary traditions.

HISTORICAL AND CULTURAL INFLUENCES

Since ancient times waves of invasions of the Iberian Peninsula have radically influenced its food. In the north the Celtic people introduced pigs and pork which is still popular today. The Romans brought irrigation and olive trees which changed the economic conditions for the better. Arabs (Moors) who ruled the region for 800 years left an indelible mark on the food habits of the inhabitants. They brought in saffron, rice, citrus fruits, almonds, eggplant, eastern spices and this has had a dominant influence on the cuisine. Being very powerful seafarers both Spain and Portugal travelled all over the world in search of spices bringing back home spices like cloves, cinnamon, nutmeg, and black pepper. With the discovery of the New World i.e. Americas, foods such as chillies, corn, beans, tomatoes, vanilla, chocolate, squash, guava, pecans, pine nuts, turkey and potatoes were incorporated into their cuisine. Their cuisines amalgamated with the colonies they ruled.

SPAIN

The Spanish landscape is dominated by a high plateau surrounded and dissected by mountains, creating regional cuisines. Spain borders the Bay of Biscay, France, Andorra and Pyrenees to the north, the Mediterranean Sea and the Straits of Gibraltar to the east and south the Atlantic Ocean to the south and Portugal and Atlantic Ocean to the west. Agriculture is a significant part of the economy. Spanish population is almost 43 million and almost all are Roman Catholic, making Christian holidays occasions for culinary celebrations.

Although distinct dishes are found within culinary regions nationally the Frittata patata

An egg omelette with potatoes is a clear favourite, Paella the rice, meat and seafood dish is another favourite so is Cocidas a brothy soup and gazpacho a cold cucumber soup and almond based sweets.

The Spanish are good eaters and sometimes may eat both an early and mid-morning breakfast as well as full lunch and dinners and in between snacking on Tapas. Lunch is considered a heavier meal than dinner. A full meal may begin with Tapas followed by an entree, then the main course and lastly sweet or dessert.

PORTUGAL

Portugal has a passion for seafood because of its long coastline. For culinary purposes Portugal may be divided into north and south separated by the Tagus River. Portugal is situated on the innermost edge of the European Continent. The population is 11million mostly Roman Catholic and Christian Culinary traditions have shaped their eating habits. Portugal terrain is generally mountainous north of Tagus River and rolling plains south of it and it has a sizeable rural population. Its main agriculture products are wheat, corn, rice, potatoes, grapes and olive oil. Dairy products are scarce especially in the north. Portuguese tend to use more varied and intense seasonings.

North is famous for its Caldo Verde a soup of potato, onions, shredded cabbage and Linguica sausage, may be thickened by cornbread. Portugal is famous for sardines and cod which are canned and salted. Specialities of Portugal are chestnut soup and almond & egg confections.

South is more hotter and fertile climate. Wheat is the staple crop and food, especially bread. Bread is also used to thicken soups or stews. Algarve is the southern most region, from it comes Piri-Piri a hot chilli sauce which is now famous in all former Portuguese colonies. The warm climate is good for cultivating figs, apricot, lemons, carob, almonds, sugarcane, citrus and rice. Portugal like Spain has a lot of Moor's influence especially in the use of almonds and egg yolks in sweets.

The Portuguese eat a light breakfast followed by a mid-morning snack then lunch followed by a leisurely dinner. The main meal will start with soup followed by a meat or fish dish accompanied with vegetables, especially green salads. Desserts are simple like rice pudding or cheese or fruit followed by coffee.

FRENCH CUISINE

In France, cuisine is not simply a source of pleasure but a multifaceted discipline. With a focus on tradition, technique and mastery of style, French cuisine is arguably the most aesthetic cuisine in the world. The development of French cuisine may be attributed to the fact that France has historically had a gastronomic capital –PARIS. Culinary resources are concentrated there—the best ingredients and the most sensitive palates were all to be found at one place.

France is situated between 43°N and 51°N latitudes and between 5°W and 9°E longitude. The hexagon shaped mainland of France is located in western Europe and is bordered by the English Channel on the north west, Belgium and Luxembourg on the north east, Germany, Switzerland and Italy to the east, the Mediterranean sea to the south east, Spain and Andorra on the south west and the Bay of Biscay and the Atlantic ocean to the west. The Pyrenees mountain range divides France from Spain.

France has an area of 547000 km², the terrain to the north and west is flat with rolling hills, while the south and east are quite rugged and mountainous. The climate is mild winters and summers in the west, cool winters and hot summers inland, tough winters in the mountains and mild winters and hot summers along the Mediterranean in the south. About 57% of the land in France is dedicated to agriculture and the population of France is approximately 61 million.

HISTORICAL AND CULTURAL BACKGROUND

Throughout its history France has been invaded by explorers from many foreign countries. In certain areas of the country Celtic, British, Basque, Spanish, Italians, Greek and Arab influences are evident. The Celtic Gaul introduced farming to this area and also developed Charcuterie for which France is famous even today. The Romans who took over introduced cheese making and the Moors introduced goat rearing and spices. Arab influence is evident in the use of almonds and rice. With the marriage of Catherine de Medici to Henry II the foundations for modern French cuisine were established. Marie Antonio Carême (1784-1833) the great Chef who organised and detailed dishes according to courses laid the foundation for Grande Cuisine. It was further refined by Chef Georges-Aguste Escoffier whose approach was based on simplicity and called it Cuisine Classique. The next major shift in French cuisine was initiated by Chef Fernand Point (1897-1955) who further simplified the menu and laid the ground work for Nouvelle Cuisine.

France may be divided into four culinary regions—the North West, North East, South West and South East. There are in all 22 provinces, each province has its own culinary specialities, impacted by history, terrain and climate.

THE NORTH WEST REGION

The North West region includes the provinces of Brittany, Basse-Normandy, haute Normandy, Pays de la Loire and the Loire Valley. This area has a long coastline and maritime climate- cool summers, warm winters and heavy rain. Proximity to the ocean results in a cuisine heavily influenced by sea food. Clams, lobsters, Dungeness crabs, oysters, skate, mackerel and Dover sole are all relished. Wild game including boar, rabbit, duck and pheasant, along with domestic goat and lamb are all popular. Normandy is renowned for cow's milk cheese –Camembert and superior butter which is utilized heavily in local cuisine. Fruits and vegetable of this region include pears, plums, apples, potatoes, artichokes, endive and pumpkins. Wheat is the preferred grain and walnuts the favourite nut.

THE NORTH EAST REGION

The North East region of France includes Nord Pays de Calais, Picardy, Champagne, Alsace, Lorraine and Franche-Comte. This region's cuisine is influenced by its neighbouring nations – Germany, Switzerland and Belgium. Thus foods traditionally associated with Germanic cuisine such as sauerkraut and sausages are popular as are waffles and beets, items of Flemish origin. Pork, wild game, foie gras, freshwater fish, escargots(snails) and frogs are commonly utilised. The products of this region are wheat, barley, endive, beets, potatoes, cabbage, wild mushrooms, truffles, plums, apples, cherries, grapes, asparagus and cheese. Wheat is used to make spaetzle and egg noodles.

SOUTHEAST REGION

The southeast region of France consists of Burgundy, Auvergne, Limousine, Rhône alps, Côte d' Azur and Corsica and is the home to the city of Lyon the culinary capital of France. Beef, pork, lamb, duck and rabbit are all common as are cheeses derived from cow's, sheep's and goat's milk. Artichokes, eggplants, tomatoes, garlic, olives, herbs, apricots, cherries, plums and figs flourish in the cool Mediterranean climate. Common fish include anchovies, sardines, red mullets and monkfish. Specialities of this region include Dijon mustard, Le Puy lentils, bouillabaisse, ratatouille and tapenade.

SOUTHWEST REGION

The provinces of Midi-Pyrenees, Languedoc-Roussillon, Aquitaine and Poitou-Charentes make up the southwest region of France. This area borders Spain and is heavily influenced by Spanish cuisine and the Arab moors conquerors from Africa. Seafood is popular including monkfish, eel, tuna, oysters, cod and mussels. Poultry, walnuts, chestnuts, porcini and

chanterelles mushrooms are harvested. The Moors introduced exotic spices such as pepper, cumin, anise, ginger, cinnamon and caraway. Specialities are fish soup with peppers and onion and jambon de Bayonne. The staples are wheat, barley and corn and like the Spanish use almond paste for thickening sauces.

Frozen Desserts

Definition:- They are cold desserts made by freezing a flavoured mixture or a concoction made from favoured full milk and cream.

History: - The Chinese knew the art of making iced drinks and dessert long before the Christian era. This art may have travelled Westward through the Greeks. Both the Greeks and Romans were known to serve fruit salads and purees mixed with honey and snow. Marco Polo the great traveller may have made it popular when he returned back from China.

Catherina de Medic introduces cold desserts in the form of ice creams to the French aristocracy when she married the future king HENRY-II. However the credit for introducing the ice cream to the public goes to Francesco Procopio which then became the rage.

Around 1775 ices became more delicate in flavour, richer and with more body so that it could be moulded easily. By the end of the 18th Century ice cream became a fashion.

TYPES & CLASIFICATION

Cold dessert is made by freezing a favoured mixture and they are of two types.

- A. They may be made by freezing the mixture without any agitation – STILL FROZEN
- B. They may be made by mechanically churning during the freezing process which result in a smooth creamy texture FREEZE CHURENED ICES.

A STILL FROZEN

- ❖ Mousses
- ❖ Soufflés
- ❖ Parfait
- ❖ Biscuit Glace or ice cream Cake

- ❖ Bombe glace

B. FREEZE CHURNED

- ❖ Ice creams
- ❖ Fruit Ices
- ❖ Sorbet
- ❖ Granita
- ❖ Marquises
- ❖ Punch.

Mousse

A French term meaning foam is applied to dishes with a foamy texture. They are usually cold, and often sweet but also savoury and sometimes even hot. Some confections are naturally foamy; others may need beaten egg white and/or whipped cream, and possibly gelatine to achieve the desired texture.

Soufflé is used as a synonym with Mousse however mousse is used for a wide range of dishes such as those incorporating savoury items such as mousse de jambon or mousse de asparagus.

Soufflé:-

A French word which literally means –puffed up and is used as a culinary term in both English and French. It is a light, frothy dish just stiff enough to hold its shape, and which may be savoury or sweet, hot or cold. Cold soufflé is difficult to distinguish from a mousse and is made in the same way.

The hot soufflé is started with a Roux blended with egg yolks and savoury or sweet flavouring ingredients to which are added stiffly beaten egg whites by folding it in. It is then baked in a high sided dish to contain its puffing.

Parfait

An iced dessert very similar to Bombe, made from fresh cream, which gives it smoothness and prevents it from melting easily and can be cut into slices. It is made by beating 8 eggs yolks over a bain-marie and then gradually adding boiling syrup (110°C) till it becomes light and fluffy, whisk away from fire till cool, and add the chosen flavour, (Syrup is made with 60 ml water +200gms. caster sugar) whip in 115 gm double cream and freeze for 6 hours.

In N. America this term has come to mean a combination of fruit and ice creams served in a tall glass which exposes the layers.

Ice cream Cake/ Biscuits glace

An iced dessert made of alternate layers of different flavoured ice creams & a bombe mixture- frozen brick shape. After removing from the mould the ice cream is cut into even sizes/ slices and then arranged in small paper cases and kept frozen till serving.

The same name is also used to describe a round/oblong cake having a sponge cake or meringue base with ice-cream or sorbet or parfait or bombe mixture on the top, decorated with whipped cream and crystallised fruits in syrup.

Bombe

A frozen dessert made from a bombe mixture, enriched with various ingredients and frozen in a mould. This dessert was named after the spherical moulds with rounded tops which were used to make it.

Traditionally bombe moulds are filled with two different mixtures. The bottom and sides of moulds are lined with ice cream or fruit ice. They are then filled with a bombe mixture made with 32 egg yolks per litre of sugar syrup at specific gravity 1.285. The syrup is made with 700 ml of water and 700gms of sugar. Wisk egg yolks and syrup over a Bain Marie till cool. Finally add an equal volume of whipped cream and the chosen flavouring.

FREZE CHURENED

Ice cream

It was only in 1620 A. D. that it was discovered that by mixing Saltpetre (Potassium nitrate) Sodium Nitrate and common salt it was possible to liquefy ice and in so doing reduce the temperature below freezing point. This endothermic effect of the mixture of ice and Salt which was packed around a container of ice water allowing the water to freeze, and so was born the potential for making frozen dessert.

During the 18th Century it was recognised that a superior ice cream could be created if the mixture was churned till it semi froze and then froze.

The world's first ice cream plant opened in America in 1851 founded by Jacob Fuisseil. Kulfi an Indian Ice cream was cited in a 16th Century document.

Definition

Ice creams are cold desserts made by freezing a flavoured mixture. Freezing is carried out commercially in an ice cream maker or churn freezer so that electrically driven blades stir the mixture throughout the operation to incorporate air and make it smooth. They may then be moulded and frozen.

Method of Preparation

Beat 7 egg yolks with 150 gm sugar till thick and creamy. Heat cream to boiling point add to above gradually and cook over double boiler till it coats the back of a wooden spoon, cool immediately and then freeze in ice cream maker.

Fruit Ices and water Ices

The most important factor in making these desserts is the density of sugar syrup+ flavoring+ Lemon juice which must be appropriate for it to freeze to a slushy density- 1.425 to 1.2407 sp gravity.

In case of fruit ices the puree of the fruit used should be equal to sugar syrup of the above mentioned sp. gr.

Sorbet or Shorbet

Definition: - A type of water ice that is more granular than ice cream as it does not contain any fat or egg yolks. The basic mixture for all sorbet is a combination of sugar syrup and fruit or fruit juices and other flavouring. It is the lower fat content and higher acidity content (0.35%) that distinguishes sorbet from ice cream.

Historically sorbets were the first iced desert. The Chinese are the first to be credited for making sorbets. The word sorbet is derived from Arabic- Turkish -chorbetll to Latin -Sorbettoll. There are several variations of the sorbet representing differences in smoothness, flavour, density and degree of hardness due to comparative degree of sugar concentrations.

Marquise

Any of various delicate deserts eg chocolate marquise is a dessert half way between a mouse and a parfait. It is based on butter, eggs, sugar and flavouring and served with custard creams or Chantilly cream.

Punch

A Cold Punch is an iced drink, which can be made with tea, sugar, spices, fruits or fruits or fruit juices, rum or brandy. The word originally described a British colonial drink derived from the Hindi word 'Panch' which means five, for five ingredients i.e. tea, lemon, sugar, cinnamon and rum which were used, a forerunner of the cocktail.

GRANITA

It is a type of an Italian sorbet, popularized by Tortoni in Paris in the 19th Century. It is a half frozen preparation with a granular texture (hence its name) made of lightly sweetened syrup and a flavouring strawberry or pineapple or coffee or Kirsch. Granita does not contain any Italian meringue.

ADDITIVES

Only permitted additives must be used and this may differ from Country to country depending upon their local laws. However, the standard adopted by the European Union, is followed quite universally.

Special alphabetic codes are used which describes a particular group of items e.g. E for colour.

Some of the additives used for frozen desserts are:-

- ❖ Colouring agents E signifying nature identical exact synthetic copies of natural substances a) Natural caramel. b) Cochineal c) Chlorophyll e) Yellow lacto flavones; f) Xanthophylls
- ❖ **Anti oxidants** – Which prevents fats and Oils from going rancid
a) Tocopherols b) Sulphurous anhydride c) lactic acid

Antioxidants and general stabilizers;-

- a) B.H.A Butylatedhydroxyanisole b) Citric Acid c) Lecithns
- ❖ **Emulsifiers** – e.g. a) Gum Arabic, b) Pectin, c) Polyglycerol esters of polycondensed fatty acids
- ❖ **Improvers** such as coal Tar dyes.

CHINESE CUISINE

Introduction

As one travels around the world today, one cannot help being impressed by the extent to which Chinese food and cooking has been established in-almost every corner of the earth. The popularisation of Chinese cuisine lies in the unique traditions and techniques of Chinese cooking, and in the inherent appeal of Chinese food and flavours _to the palate, and also Chinese food can be extremely economical as well as being highly nutritious, because, most ingredients are cut into small pieces, then quickly cooked so as to retain their natural goodness.

Chinese culinary art has gone through thousands of years of refinement and development, but the Chinese unique way of cooking and preparing food, remains basically unchanged. Archaeological finds of the Bronze Age (around 1850 BC) indicate that the Chinese had utensils such as bronze Cleavers for cutting up foods into small pieces and cooking them in animal fat, using a bronze pot not dissimilar to the modern wok. There is data to prove that as long ago as the ZHOU dynasty (12 C BC) the Chinese used Soya sauce, vinegar, rice wine, fruit jam and spices as seasoning for their cooking and that elaborate and complicated cooking methods were already being employed.

By the time of China's greatest sage CONFUCIUS (551 - 479 BC) who was an acknowledged gourmet recorded that the importance of heat application and blending of different flavours were emphasized in Chinese cooking; and the uses of high, moderate or low heat, the blending of sour, piquant, salty, bitter or sweet flavours were all given their correct application in order to achieve a harmonious whole. This theory of harmony is one of the main characteristics of Chinese cuisine to this day.

Today, Chinese cuisine is generally considered along, with the French as one of the two greatest cuisines. It is simple, highly adaptable to the taste of the other countries and best of all it can be prepared by anyone, possessed of a little patience. Tai See Foo - or Master Chef is a much-disciplined man, no where is the Tai See Foo in such importance as in China, where, in relation to the Chinese philosophy of life, his profession over the centuries has been looked upon with the greatest respect in the community.

The Chinese value food highly and rarely wastes any, many recipes require the use of leftovers and cooking ahead is standard practice. The basic flavours are six – Sweet, Sour, Bitter, Spicy (sharp) Pungent and Salty. Their distribution, proportion and use must be controlled for proper blending. Meat has always been a major item in Chinese diet; however the meat ration per person was small. Efficient utilisation, proper colour arrangements and palatability often required highly imaginative combinations. Often the meat could only be flavouring for a dish rather than the main ingredient.

China's economy has seldom been able to afford such animals as the cow and the lamb, inadequate pastureland for cattle has made raising these animals difficult. Pork is therefore

China's most common meat. In the north, mutton is commonly used, particularly by the Chinese Muslims. Many Chinese Buddhist for religious reasons, will eat only vegetable, the cooking of which was developed to a high degree. The scientific study of vegetable became a part of Taoism and its devotees devised a highly nutritional vegetarian diet, an art so refined that their vegetarian dishes resemble meat in taste as well as in texture.

The elements that contribute to the wide sensual appeal of Chinese food, which make it so acceptable to all people world over are:

- 1) Chinese meals are communal meals and communal dishes served on the table are of necessity, bigger and fuller than the average dishes, they are therefore bound to create a greater visual impact and are more sumptuous in appearance. The exoticism of size and variety is further enhanced by the Chinese use of heat as an integral part of flavour - the use of heat to induce, ignite, and set ablaze all the latent desires in our appetites. Hence in a well-served Chinese meal, the time-lapse between the food leaving the hot pan and its arrival on the table is measured not in minutes but in seconds.
- 2) Chinese dinner is a multi-dish or multi-course meal.
- 3) The frequent and deliberate exploitation of changing textures both the harmony and contrast of textures are exploited.
- 4) The bulk intake of rice produces the ultimate physical satisfaction in eating along with several soups.
- 4) The use of soya beans and their by-products - soya sauce, soya paste, soya-cheese, soya bean curd, etc. are able to seduce our palate and taste buds.

The basic purpose of cooking is primarily to render food edible, and secondly to render it more enjoyable to eat. To achieve these purposes two methods are generally employed, heating and flavouring.

HEATING:

Take the heating of food, which is basically capable of only a limited number of variations such as heating by air, baking, roasting, heating by fire or radiation, grilling, barbequing, heating through the medium of water or by oil or heating by conduction. By combining the different methods, by varying the pace of heating (Fire - Power), by varying the speed or lengthiness (time) of treatment by varying the stability of mobility (stir frying) of food while being heated the Chinese have developed some forty different accepted heating methods, each with its well defined and established terms of reference and conception.

FLAVORING

In the case of flavouring the Chinese have developed and advanced even farther than in heating (cooking). This is due to the normal Chinese practice of cross cooking different types of food which results of large scale cross blending of flavours. Although not all Chinese dishes are mixed dishes - some consists of only one ingredient cooked in the simplest way. The seasoning materials and sauces are often applied at the last stage of cooking. The flavouring of Chinese cooking is achieved through a multi layer process i.e. Through the use of -supplementary ingredients for cross cooking to provide variety and difference in texture and material, the use of flavouring ingredients, seasonings and sauces to further enhance the taste and flavour and finally through the serving of table condiments to provide the individual diners with the opportunity to do their own personal "touch-ups" before consumption.

In order to reduce confusion, it is normal practice in Chinese kitchens to divide the job of cooking into two clear stages: Preparation and actual cooking. The task of preparation and the task of cooking are usually carried out by two different persons. The preparations and portioning of the principal and supplementary ingredients are usually carried out by the assistant cook, while the chef attends to the firing (control of the heating) and all the work over the stove including flavouring and the application of all the sauces and seasonings.

THE MAIN CHARACTERISTIC OF CHINESE CUISINE

Actually, Chinese cooking is often simple, even for beginners provided you follow a few firm rules. The first thing to remember is that preparation and cooking are separate procedures;

all preliminaries must be completed before actual cooking begins. Chinese foods must often be cooked quickly and at very high temperatures. Chinese use oil in their cooking - usually vegetable oil. With this oil one can get the high temperatures needed to seal in the flavour and original colour of the foods and also to preserve the all important crispness and vitamins of vegetables. They do not use butter and many other dairy products either vegetables rather than meat predominate. Soups play various parts in the symphony of a well composed meal - not only is there one as a light appetizer but clear soups are often used between courses as palate cleansers. Richer soups like velvet corn, may however be served as a separate course.

There exists a certain 'uniqueness' that distinguishes Chinese cooking from other food cultures. There is the Chinese division when preparing and serving food between 'TAN' (grain & other starch food) and 'CAI' (meat and vegetable dishes) Grains in various forms of rice or wheat flours (bread, pancakes, noodles or dumplings), make up the 'TAN' half of the meal. Vegetables and meat (including poultry, meat and fish) cut up and mixed in various combinations into individual dishes constitute the 'CAI' half. A balanced meal must have an appropriate amount of both 'TAN' & 'CAI'. It is combining' various ingredients and the lending of different flavours for the preparation of 'CAI' that lies the fine art and skill of Chinese cuisine.

The other distinctive feature of Chinese cuisine is the harmonious blending of colours, aromas, flavours, shapes and textures in one single 'CAI' dish. The principle of blending complimentary or contrasting colours and flavours is a fundamental one - the different ingredients must not be mixed indiscriminately. The matching of flavours should follow a set pattern and is controlled and not casual. The cutting of ingredients is another important element of Chinese cooking in order to achieve the proper effect. Slices are matched with slices, shreds with shreds, cubes with cubes, chunks with chunks and so on.

This is not only for the sake of appearance but also because ingredients of the same size and shape require about the same amount of time in cooking. This complexity of interrelated elements of colours, flavours and shapes in- Chinese cooking is reinforced by yet another feature: TEXTURE. A dish may have just one or several textures, such as tenderness, crispiness, crunchiness, smoothness and softness. The textures to be avoided are: sogginess, stringiness and hardness. The selection of different textures in one single dish is an integral part of blending of

flavours and colours. The desired texture or textures in any dish can only be achieved by the right cooking methods. In all different methods of cooking the correct degree of heat and duration of cooking time are of vital importance.

REGIONAL COOKING STYLES.

China is a vast country and as such is exposed to extremes of both geography and climate. This naturally results in the growth of different agricultural products, so it is of little wonder that cuisines vary from province to province. Looking at the map of China, it is not difficult to understand why there should be such a rich variety of different styles, throughout the land. Even though there is no official classification of various regional cuisines in China, but it is generally agreed SICHUAN in the west, SHANDONG in the north, CANTON in the south and JIANGSU in the east represents the four major regional cooking styles of China. In addition, four more provinces ZHEJIANG, FUKIEN, ANHUI in the east and HUNAN in the west are usually included in the role of honour while one talks of the "Big Eight" distinguished schools of cuisine in China.

Northern School

Archaeological evidence shows that in about 5000 BC, the inhabitants of North China had begun to farm, settle down and make painted pottery, eating and cooking vessels. Some of the most conspicuous traces of early Chinese culture have been found at sites that lie along the valley of the Yellow River, which is why this area is sometimes described as the "Cradle of Chinese Civilization". Two ancient capitals of LUOYANG and KEIFENG are both situated just south of the Yellow River in Hunan province ("HU" is the Chinese word for "river" and "NAN" means "south"). The noblemen and the imperial families live in such luxury that their chefs invented and perfected many of the Chinese classic dishes. These recipes were passed down through the centuries, and were moved to the capital, Peking and beyond.

China's North has two very long and distinct seasons (winter and summer) with short transitional periods in between. Winters are dry and cold, with temperatures often below

freezing. Summers provide intense heat and rain. Its diverse terrain (hills, valleys and rivers) give variety to the region's agriculture.

Due to the extremely dichotomous climate, the land's produce is hearty: mainstays of wheat and corn, especially important to the Northern China economy, dominate the northerner's dietary needs. Crops are then manufactured into wheat-flour for use in common cuisine: noodles, stuffed buns, dumplings and steamed bread are just a few of the wheat products consumed in the provinces of this region. Although little rice is grown in this region, other hardy plants such as barley, millet, soybeans, cabbage, squash and apples predominately appear in northern Chinese agriculture and cooking

In the northern school the staple food is not rice but wheat flour, from which are made many noodle, dishes, steamed bread and dumplings. Northern food tends to be lighter than that of other provinces. From Peking (meaning northern capital) and its neighbouring districts come notable dishes prepared with wine stock. Northern cooking includes pungent sweet and sour dishes and more subtle, delicately seasoned foods. The use of garlic and spring onions is also characteristic.

Much of the north is bordered by Mongolia where people eat a lot of mutton. Food from Inner Mongolia and Shantung forms the backbone of northern cuisine.

Now Peking cuisine is quite a different matter, it is not a separate regional school, but rather the combination of all China's regional style of cooking. Being the capital of China for many centuries Peking (or Beijing as it is now called) occupies a unique position in the development of Chinese culinary art. Peking cuisine has been defined by the eminent Chinese gourmet Kenneth Lo as "The crystallization of many inventions and performance of the generations of imperial chefs of different dynasties which have ruled in Peking for nearly a millennium, and the local dishes of the people of Shandon and Hubet which have been in the habit of preparing together with all the culinary contributions which over the years have established their reputation in the old capital. Peking cooking is in short, the top table of Chinese culinary art. Peking cooking exhibits the greatest ingenuity and inventiveness.

Notable flavours and dishes—

Beijing is known for jiaozi, the traditional Chinese dumpling, and Peking duck. Jiaozi dumplings are often filled with pork and vegetables, but variations may include sweet fruits (dates) or chestnuts. Peking duck is a traditional delicacy perfected during the Qing Dynasty and served to important and wealthy individuals throughout history. The duck and its skin (a delicacy) are served with Hoisin (Peking) sauce in flat-bread wrappers.. Northern cuisine includes the Henan (north of the river) region. Strikingly unique from other northern flavours is the Shaolin vegetarian cuisine. Chinese Buddhist belief has for centuries prohibited the eating of animal flesh, and the monks here have spent an age perfecting the cooking of all types of vegetarian food. This cuisine is very nutritious and healthy.

The western school

The Szechuan style of cuisine arose from a culturally distinct area in the central western part of China, a province known as Sichuan. This area of China came into its own culturally towards the end of the Shang Dynasty, during the 15th century. However, it was also the climate of the area that helped to shape the culinary traditions that were to arise from Sichuan province and make their way into the realm of international cuisine.

The province from which the cuisine that the world knows as Szechuan evolved is often hot and humid, and this contributed to this necessity of preparing foods in ways that differ significantly from other regions of China. Szechuan cuisine is primarily known for its hot and spicy dishes, though naturally there is more to Szechuan food than spice and sauces rich and strong in flavour.

Much of the spicing of regional Chinese cooking is based upon bringing together five fundamental taste sensations – sweet, sour, pungent, salty and bitter. The balance of these particular elements in any one dish or regional cuisine can vary, according to need and desire, especially as influenced by climate, culture and food availability.

In Szechuan cuisine, there are a variety of ingredients and spices used to create these basic taste sensations. These include a variety of chilli peppers, peppercorns over various types, Sichuan peppers, which are in reality a type of fruit, not pepper, and produce a numbing effect in

addition to their warm flavour. Sichuan peppers, also called flower pepper and mountain pepper, are a traditional part of the Chinese five spice powder, or at least of those that are modelled upon the most authentic versions of the spice combinations common to regional Chinese cooking.

Other ingredients used commonly in Szechuan cuisine to create the five fundamental taste sensations include different types of sugars, such as beet root sugar and cane sugar, as well as local fruits for sweetness. The sour comes from pickled vegetables and different varieties of vinegar. A special bitter melon is added to many dishes to offer the touch of bitterness that complements other flavours. Other spices and flavours include dried orange peel, garlic, ginger, sesame oil and bean paste. Salt is important to Szechuan cuisine, and the area produces uniquely flavoured salts that help to distinguish authentic Szechuan cuisine from the other regional cuisines from China.

Szechuan cuisine is marked by its rich traditional flavours, which stem from a culture of hundreds of years and are in part shaped by the natural forces of climate. Authentic Szechuan cuisine offers a unique dining experience made up of adventurous and creative taste sensations.

Specialities

Hunan (south of the river) cuisine: Renowned for its soups, is one of the oldest and richest also noted for its spicy, pungent and flavourful dishes. Hunanes are especially fond of using chillies, sweet peppers and shallots in cooking. Sichuan (Szechuan) cuisine: hot, spicy chillies, ma po doufu, hot pot Famous for its heat and distinct flavours, Sichuan cooking mastered the light cooking techniques of stir-frying, sautéing, and dry-braising. One of the region's most famous recipes is ma po doufu, a spicy bean-curd and vegetable dish cooked with some of the most powerful chillies in the world. In traditional Chinese medicine and nutrition, hot chilli peppers are considered helpful in reducing the -internal dampness. The humid climate also compels a creativity and variety in food preservation, including techniques such as picking, salting, drying and smoking.

Inland cooking also makes much use of the fungus called Cloud ear or, Tree ear.

Tea smoked duck, Chicken chilly, Liver Paste Soup, Hot & Sour Soup, Beans A La Szechwan, Dong An Chicken, Fried crab, Soy Braised duck, sliced Hoi sin Pork, Bean curd, Spiced Turnip etc., are some of the famous dishes of this region.

The Eastern School

The Yangtze, China's longest river which traverses the width of China from west to east flows through China's leading agricultural regions-Sichuan and Hunan (on the upper) Hubei and Jiangxi (on the middle) Jiangsu and Zianzgi (on the lower),which contains some of the most fertile land in China. :

Both wheat and rice are grown here, as well as other crops which include — barley, corn, sweet potatoes, peanuts, and soya beans. Fisheries abound in the multitude of lakes and other tributaries and deep sea fishing has long been established in the coastal province of Jiangsu and Zhejiang The areas that cover the middle and lower regions of the Yangtze are traditionally referred to as 'Land of Fish and Rice', and is collectively known as Jiangnan ("JIANG" means 'great river' referring to the, Yangtze and 'NAN" referring to the south), and it boasts a number of distinctive cooking styles.

The Yangtze River delta has its own cooking style known as HYAIYANG with the culinary centre in Shanghai that is China's largest city which lies on the Yangtze estuary. South East China has always been regarded as the most culturally developed and economically prosperous region. Both Nanjing in Jiangsu and Hangzhou in Zhejiang have been China's capital of several dynasties; other culinary centres are to be located in YANGZHOU (Yangchow), SUZHOU and ZHENJIANG. Yangchow fried rice, chow mien (open fried noodles), wantons, spring rolls, dumplings and many other Cantonese dim sum dishes have all originated from here.

South of Zhejiang is the province FUJI AN (FUKIEN) which is sometimes grouped in the Eastern School, but its cooking style is more influenced by its southern neighbour Canton, so very often Fukien cuisine is included with Cantonese in the Southern school.

Taken as a whole, Eastern cuisine is rich, decorative and rather on the sweet side; unlike Peking food, garlic is used sparingly, if at all. The area as a whole is renowned for certain products and dishes: the specially cured Chinhua ham, with its pinkish red flesh and succulently

savoury-sweet taste, the rich dark Chinkiang vinegar and the amber-coloured Shdaohsing rice wine. Classic dishes include Crisp stir-fried shrimp, Eel cooked in oil, Yangchow fried rice, Lion's head and fish from the West Lake with a sweet and sour sauce.

One special cooking technique of the region has been adopted nationally. This is hung-shao the red-braising method of cooking, whereby the ingredients (mainly meat, poultry and fish) are cooked slowly in an aromatic mixture of thick dark soy sauce and rice wine. When, at the end of cooking, the sauce is reduced and spooned over the main ingredient, the resulting taste is both rich and fragrant.

Shanghai cuisine is the least known outside China. Its oiliness and sweetness are perhaps less appealing to the Western palate, and because it is decorative, it tends to be labour-intensive. Moreover, it depends largely on fresh local produce; the famous Shanghai crabs, studded with yellow roe in the autumn, have no counterpart elsewhere and for the delicate taste of the famous West Lake fish one has to go to Hangchow.

The staple food of this region is rice. The cooks on the coast use more soya sauce and sugar and specialise in salty and gravy-laden dishes. Fish and shell fish from the many rivers and the neighbouring sea are popular ingredients. These are gently spiced concoctions of meat, chicken, duck and sea food with, of course lots of vegetables. Fukien produces the best soy sauce and therefore its cuisine has a good deal of stewing in this sauce or "red cooking" as it is called because of the colour the sauce imparts. The soups are clear and light. The Fukienese excels in their soft spring rolls and sea food. Fukien is also famous for its pork and chicken dishes made with sweet-tasting and fermented rice paste.

Speciality and Popular dishes:

Yangchow fried rice, Chow mien, Spring rolls, Dim sums, White cut pork, lion's head (pork meat balls with cabbage - the alarming name of this dish refers to the pork meat balls which are supposed to resemble the shape of a lion's head and the cabbage which is supposed to look like its mane), Squirrel fish.

The Southern School:

The Pearl River delta, with Canton as a provincial capital of GUANGDONG (KWANGTUNG), is undoubtedly the home of the most famous of all Chinese cooking styles. Unfortunately the reputation of Cantonese cuisine has been badly damaged by a so called 'chop suey' food outside China. Authentic Cantonese food has no rival and has a greater variety of food than any other school because Canton was the first Chinese port open for trade, therefore foreign influence are particularly stronger in its cooking. There are many pig and poultry farms and fish ponds. High, quality tea is a special product of Fukien, while all along the coast fish and sea food - crabs, cray fish, shrimps, prawns, scallops, clams - are plentiful. This wealth of ingredients has helped to make Cantonese cooking the most versatile and varied of Chinese cuisines. Cantonese food is not highly seasoned, instead a harmonious blending of different flavours is sought in order to bring out the best of the ingredients. Cantonese cooks are at their most skilful when they stir-fry dishes. Red-braised dishes are an eastern contribution to the Chinese gastronomy but southern stir-fry dishes reign supreme nationwide. Their 'wok fragrance' a term used to describe the aroma so desirable in stir-fry dishes is matchless.

Southern cooking is subtle and the least greasy of all the regional styles. The cooks excel in stir-frying. At its best, the cuisine tends to be more costly than the others because the cooks use highly concentrated chicken bouillon as the basis of their soups and general cooking: They like to use nuts and mushrooms in their dishes. They prepare many varieties of sea food and lots of roasted and grilled pork and poultry. Steamed dishes are also featured.

Fisheries play a major role in the economy, Guangdong contributes about one fourth of China's fish catch (over 20% of the fish caught here are fresh water fish). Rice is a dominant food grain; the other crops are tea, tobacco, peanut, sugarcane and sub tropical fruits such as bananas, pineapples, oranges, tangerines and lychees.

HAINAN Island is the only truly tropical area of China and produces coconuts, coffee, natural rubber and figs.; The Southern School consists of three distinct styles of cooking: CANTON, CHAOCHOW. (Sv.atow), and DONGJIANG (also known as HAKKA), which means 'family of guest', which refers to the immigrants from North China who settled in the

South during the Song Dynasty after the invasion of Mongols in the 13th Century. So it was the Hakka's who introduced noodles, wantons and dumplings etc, into the Cantonese diet.

There was a mass immigration overseas after the 17th century both by the Cantonese and the Hakka. When Swanton was opened to foreign trade in 1858, it became a major port for Chinese immigration to South East Asia, America and Europe. That is why; the first Chinese restaurant to open abroad introduced only Cantonese cooking to the outside world. Schools of cooking there are two other schools, though not regional in character, nevertheless should be included here among China's various styles of Schools of Cooking, namely the Moslem and Vegetarian School.

Specialized and popular dishes:

Dim-sum, Shao-mi, Cantonese roast duck, Sweet & Sour Pork. Pork Goose, Ducks webs in oyster sauce, Stuffed green peppers, Shark's fin soup, Turtle soup etc. are very famous.

The Moslem School:

The Chinese Moslem known as "HUI" though Chinese speaking are distinguished from the Chinese by their affiliation with the Sunni branch of Islam. One theory is that they are descendants of the Moslems who settled in China in the 13 century and adopted the Chinese language and culture.

There are nearly 5 million Hui widely distributed throughout almost every province in China, but their traditional areas of settlement is in the North-West with heavy concentration in Hunan, Shansi, Hubei and Shangdong. They form the Chinese Moslem school, together with two other national minorities: the UYGOR group in XINJIANG (4 million, virtually all Moslems), and about 1.5 million MONGOLS who are traditionally nomadic, and therefore, like the Moslem, do not eat pork. Their daily diet consists of beef, mutton, milk and butter, items an average Chinese has no taste for.

The Vegetarian School

Chinese vegetarians are not allowed anything remotely associated with animal including egg and milk. They obtain their proteins mainly from soya beans and its byproducts such as bean curd (tofu), nuts and fungi.

Chinese vegetarian has a long history; its origin can be traced to as far back as around 500 BC, when the TAOIST SCHOOL of THOUGHT developed the hygienic and nutritional science of fruit and vegetables. Some centuries later when Buddhism which abhors the killing of any living creature and the eating of flesh in any form was introduced into China from India, this philosophy was readily grafted into TAOIST school of Cooking and a new form of vegetarianism was born.

Apart from the extensive use of fresh and dehydrated vegetables the vegetarian chefs have developed a new art by creating food that has become known as imitation meats. This imitation pork, chicken, fish and prawns and so on bare an amazing resemblance to their fleshy counterpart in form and texture, though not quite in flavour.

EQUIPMENT

UTENSILS.

The Chinese batterie de cuisine consists of very few basic implements unlike the western kitchen. To start with .only four of the most rudimentary implements are essential to cook Chinese food, i.e. Cleaver, chopping block, wok and stirrer. The Chinese cooking utensils are ancient designs, they are made-of basic and inexpensive materials and they have been in continuous use for several thousand years. As for the rest of the cooking utensils such as sieves, spatula, strainer, casserole, steamers you will find the western version to be less effective. The other tools which are used in the Chinese kitchen are cooking chopsticks, bamboo steamers, strainers, Mongolian fire pot ladles, fish slices, wok-brush, wok scoop, bamboo mat, etc."

CLEAVER

The Chinese cleaver is an all purpose cook's knife that is used for slicing, shredding, peeling, pounding, crushing, chopping and even for transporting cut food from the chopping

board or to a plate directly to the wok. At the first site, a Chinese cleaver may appear to be hefty, gleaming ominously sharp but in reality it is quite light, steady and not at all dangerous to use provided you handle it correctly and with care. Cleavers are available in a variety of materials and weight. They all have a blade of about 8-9 inches long and 3-4 inches wide. The heaviest weighing almost a kg called CHOPPER is really meant for the professionals and is excellent for chopping bones such as drumsticks, pork spare ribs etc. The smaller and much lighter SLICER with a thinner and sharper blade is convenient for slicing, meat and vegetables. But most Chinese cooks prefer a medium weight, dual purpose cleaver known as the CIVIL and MILITARY Knife (wen-wu-dao in Chinese).The lighter front half of the blade is used for slicing, shredding, and scoring etc. and the heavier rear half of the blade is used for chopping and so on. The back of the blade is used as a pounder and tenderizer and the flat side is used for crushing and transporting. The end of the handle acts as a pestle for grinding spices.etc.,. The blades of a cleaver should be made of tempered carbon steel with a wooden handle. Stainless steel cleavers with metal handles may look good but require more frequent sharpening, also the handle gets slippery .therefore they are less satisfactory for both safety and steadiness. Always keep the cleaver blade sharp and clean. To prevent it from rusting and getting it stained wipe it dry with cloth or kitchen paper after use. Sharpen it frequently on a fine grained whet stone. Try to get a whetstone that has two different' grades of surface. Use a rough grain only if the blade has become blunt and the finer grained surface for a sharp finish to the edge. Lubricate the stone with vegetable oil or water and then put a damp cloth beneath it for stability. A cleaver of medium weight made of carbon or stainless steel is ideal for general use.

CHOPPING BLOCK

The traditional Chinese chopping block is a cross section of a tree trunk. Made of hard wood they range from about 12.inches in diameter and 2 inches thick, to giant ones up to 20 inches by 6-8 inches .The ideal size should be about 16 inches in diameter and at least 3-4 inches thick to be of any real use. To prevent it from splitting, season a new block with a liberal dose of vegetable oil on both sides. Let the wood absorb as much oil as it will take and sponge the block with salt and water and dry it thoroughly .Never soak the block in water nor wash it with any detergent - after each use., just scrape it clean with the blade of a cleaver then wipe the surface with a sponge or cloth wrung out in plain hot water. Always stand the block on its side when not

in use. Never cut raw ingredients and cooked food on the same surface .Use different block or board for the two types of food for hygienic reasons .Use one side for chopping only then the other side should remain smooth enough for pastry making.

WOK

The Chinese cooking utensil known as "WOK" is the POT or PAN the correct translation should be GOU. The wok was designed with a rounded bottom to fit snugly over a traditional Chinese brazier or oven which burned wood .charcoal or coal. It conducts and retains heat evenly and because of its shape the food always returns to the centre of the wok where the heat is most intense that is why it is ideally suited for quick stir frying .Of course the wok is far more versatile than just a frying pan, it is also ideal for deep frying , its conical shape requires far less oil than a fiat bottomed deep fryer, and has more depth which means more heat and more frying surface, which means that more food can be cooked more quickly at one go .Furthermore since the wok has a large capacity on the upper end as the oil level rises when the raw ingredients are added to it, there is a little chance for the oil to overflow and catch fire as often is the case with the conventional deep fryer. Now days a metal collar or ring purchased with the wok adapts it neatly to any gas or electric range.

Besides being a frying pan (deep or shallow) , a wok is also used for braising, steaming, boiling, and even smoking in other words the whole spectrum of Chinese cooking methods can be executed in one single use utensil. Basically there are only two different types of wok- the DOUBLE HANDED WOK with two handles on two opposite sides and the frying pan type SINGLE HANDED WOK .Both types are usually made of light weight iron or carbonized steel, and the diameter ranges from about 12-18 inches. The single handed wok may appear to be unsteady and slightly tipped to one side, but in fact it is quite safe and much easier to handle particularly for quick stir frying since it offers you plenty of leverage of tilting and tossing .the disadvantages of using a double handed wok is that you need strong wrist and oven gloves to lift it, as the metal handles get very hot even if they are reinforced with heat resistant plastic or wood. A dome shaped lid would be another useful item for certain braising and steaming dishes .Wok lids are usually made of light metal such as aluminium with a wooden or plastic knob on top as a handle. The dome shaped allows the cooking of a whole chicken or duck in a wok and

the natural curve will guide the condensation inside the lid sliding down along the edge rather than dropping down directly onto the food that is being cooked.

STIRRER.

Some wok sets often consist of a pair of stirrers in the shape of a ladle and a spatula, made of iron and stainless steel; both have a long handle with wooden tip. Of the two, the ladle or scooper is more versatile. It is an indispensable utensil in the professional kitchen, since it is used for adding ingredients and seasonings to the wok besides being a stirrer and scooper during cooking as well as transferring food from the wok to the serving dish or bowl. It is also a measure for the cook, as the standard ladle will hold 6 fl oz (180 ml or 2/3 cup) liquid, slightly smaller than the rice bowl. The spatula or shovel has a rounded end to match the contours of the wok therefore it can be very useful for scraping and lifting fried food the bottom of the wok such as when cooking a whole fish etc. Sometimes it is used in conjunction with the ladle for stir frying, rather like when you are mixing or tossing a salad with a pair of spoon and fork.

INITIAL PREPARATION.

Cutting Techniques.

The cutting of various ingredients into different sizes, thickness and shapes is an important element in Chinese cuisine .As mentioned earlier, the Chinese always cut their food into small neat pieces before cooking, partly because of fuel conservation, small pieces of food can be cooked quickly before the sticks of fire wood burn out and partly because, small pieces of food are easier to be served and eaten with chopsticks, since knives and carvers have never been used on Chinese tables. The fact that small pieces of food only require a short time for cooking ,thus retain much of the natural flavours and nutritious value is an added bonus in Chinese cooking ,which must be regarded as an incidental discovery..

When it comes to the actual cooking, the two most important factors are the degree of heat and the duration of cooking. These two factors are so closely related to each other that it is very difficult to give a precise cooking time in most recipes, since much depends on the size and condition of the ingredients, and above all, on the type of the stove and cooking utensils used.

All in all, there are well over 50 different distinct methods of cooking in Chinese cooking. They fall roughly into the following four categories:-

1. WATER COOKING: : Boiling, Poaching, and Simmering
- 2 OIL COOKING : Deep frying, shallow frying, stir frying, braising.
3. FIRE COOKING : Roasting, Baking and Barbecuing
4. STEAM COOKING: Steaming.

COOKING METHODS.

The Chinese divide the temperature of heat into "Military"(high or fierce and • medium) and 'civil' (low or gentle and weak) And proper control of temperature and cooking time is the key to success.

High or fierce heat is usually used for quick cooking for and tender foods. Different kinds of frying, .steaming, instant boiling etc and call for a high heat.

Medium or moderate heat can be used for quick -braising, steaming, and boiling.

Low or gentle heat is used for slow cooking allowing the flavours to penetrate through all the ingredients such as roasting and simmering.

Weak heat is used for long cooking turning hard ingredients soft. It is used for simmering, braising and stewing.

Here are some 25 commonly used methods in Chinese cooking .One dish may require one ,two or three methods each will produce a different effect.

1. CHAO Stir frying. By far the most common method of Chinese cooking .Practically all vegetables will be cooked this way. Here a wok is most useful Heat the wok first then add the oil until it smokes add the ingredients, stir and toss .constantly no more than 2-3 minutes. In other way stir fry the ingredients in a little hot oil over a very high heat. This method is widely used and has many variations.

- a. Pure stir frying: the raw ingredients are not marinated nor coated with a batter, they are just stir fried in hot oil and seasonings are added towards the end of cooking .Most vegetables are cooked in this way.

- b. Braising stir frying: The main and supplementary ingredients are cooked in this separately .at first and then brought together with the addition of seasoning and stock or a thickening agent (usually of corn flour mixed with water) and braised very quickly over high heat.
- c. Twice cooked stir frying: One ingredient has been previously cooked and is here cut into smaller pieces and stir fried with other ingredients and seasonings.

2. **ZHA** Deep fry in hot oil over a high heat.

Food is fried in a large quantity of oil over a high or medium heat. There are different variations of deep frying

- a. Neat deep frying: the raw ingredients are not coated with batter or flour.
- b. Dry deep frying: Raw ingredients are coated with dry flour or breadcrumbs.
- c. Soft deep frying: Raw ingredients are coated with batter, first and then deep fried for crispness.

3. JIAN. Shallow frying over a moderate heat. Similar to tire western way except that in some cases stock or water is added at the last minute forming a gravy .A flat bottomed pan is used . a little oil and medium or low heat .Seasonings are added when food is half done. The pan should be turned from time to time during cooking so that the heat is evenly distributed.

4 BAO. Rapid frying literally means to explode. It takes an even shorter time Than stir frying using very high heat .Rapid stir frying is another form of stir frying , the ingredient or ingredients have been deep fried or rapid boiled first, they are then quickly stir fried over very high heat for a short period of time. Variations in this method include rapid stir frying in oil rapid stir frying in bean sauce and rapid stir frying with spring onions,

5 SHAO. Braising literally meaning to burn or in this case to cook. The ingredients are first fried in a little oil over a moderate heat, then simmered in stock until very little liquid or juice is left. Red cooking In this widely used method of cooking the meat is cut into small chunks then

deep fried or par boiled or steamed until half done .Seasonings (Soya sauce, wine vinegar sugar etc) stock or water are added to it ,the whole thing is brought to a boil and simmered until done.

6. MEN. Stewing, it is very similar to braising except that it usually takes longer over a low heat. Slow braising- the food must be fried first (light brown) then all the ingredients (seasonings etc.) are put in a tightly covered pot and simmered over a very low heat slowly like a casserole.

7. DUN. Simmering In this method of cooking no oil is used at all and the food is cooked over low heat .Slow cooking, there are two kinds of slow cooking in water. Slow cooking in water is a form of stewing , slow cooking, out of water involves a double boiling technique .When the pot that contains the food is immersed in a large pot of boiling water. .

8. ZHU. Boiling over moderate heat. Boil the ingredients directly in water over low heat.

9. CHUAN. Rapid or fierce boiling over high heat for a very short period of time. This simple cooking is often used for making soups Bring the water or stock boil over-high heat add the ingredients and seasonings, serve as soon as the soup re-boils. No thickening agents added and the vegetables will be crisp and fresh.

10. ZHENG. Steaming needs no explanation .Traditionally the Chinese use bamboo steamers which sits in the wok .Another widely used in China not only for cooking .but also for treating raw ingredients before cooking by other methods , or to keep food warm after they have been cooked.

11. .LU. Stewing in stock made of Soya sauce five spice powder and sugar over low heat .Soya stewing- a Soya-gravy is made first the ingredients are stewed in this gravy over a low heat.

12. HUI. Another form of braising - literally means "Assembly" Normally a number of ingredients, some cooked, some semi cooked are blended together for the final stage of cooking in a gravy using a high to moderate heat. A method of cooking a dish that consists of several different ingredients. Stir fry the ingredients first add stock or water and seasonings, boil over high heat for a short while, then thicken the gravy before serving .Alternately prepare the gravy first then add the partly cooked ingredients (deep fried or steamed), cook over low heat .thicken the gravy and serve..

13. KAO. Roasting which hardly needs explanation, except that in China most kitchens are not equipped with ovens , therefore most of the roasting is done as barbecuing in a restaurant. The ingredients are first marinated or treated then either cooked in an oven or over an open fire like barbecuing

14. BAN. Mixing raw food or salad or-cold dishes which are mixed together with a dressing. Mixing salads. This method does not actually involve cooking, but simply calls for cutting the raw or cooked ingredients and dressing it with seasonings.

15. SHAUN. Instant boiling or rinsing thinly sliced ingredients are dipped into boiling water for a second or two, and then served with a sauce. This cooking method keeps the ingredients fresh and tender.

16. AO- Stewing or braising. Flavour a little hot oil with spring onions and ginger root then stir fries the ingredients for a short time. Now add the stock or water and seasonings, simmer over a low heat .The food should be soft and tender.

17. QIAND Hot salads. Here the raw ingredients are parboiled or blanched first, then dressed with seasonings. The difference between cold salad and hot salad dressings is as follows:-

Cold salad dressing- Soya sauce, vinegar, and sesame seed oil.

Hot salad dressing: Ginger shreds, Sichuan pepper corn, salt, sugar and sesame seed oil.

18. YAN Pickling- Pickle the food with salt and sugar or with salt and wine .Dishes prepared this way has a subtle fragrance and is crisp.

19. TA Pan frying- The ingredients are coated with batter fried in a small amount of oil on both sides over a low heat until done. The ingredients may be deep fried first, and then finished off by pan frying .Seasonings and sauce is added towards the end of cooking.

20. TIE-PAN. Sticking frying. This is basically a form of shallow frying, but only one side is fried, the food is not turned over, so that one side is golden brown and the other side is soft and tender.

21. LIU sauté This is a special technique which involves two stages of cooking .First deep fry , quick or rapid boil steam or boil the ingredients until done, then mix with seasonings to make a sauce.

- a. Dark brown sauté Pour the sauce over the cooked foods and serve.
- b. Slippery sauté Stir fry the raw ingredients and pour the sauce over half way through cooking, stirring constantly until done.
- c. Soft sauté Steam or boil the ingredients and then, while they are still hot add a thin and delicate sauce.

22. PENG. Quick braising. This is one of the important cooking techniques and is always used with deep frying .The ingredients are cut into small pieces and deep fried first, then taken out of the oil and a sauce is added .While the sauce is hot stir fry over high heat and remove the wok from heat and continue stirring for few more times before serving.

23. JIANG: A soya braising. The difference between soya stewing and soya braising is that the ingredients are marinated first in the sauce in which it is cooked, with the additional stock and water. The sauce is reduced or thickened and is served with dish.

24. PA. Braising in sauce. In this method, a little oil is first flavoured with spring onions and or ginger root; the ingredients are then placed in the wok or pot and simmered until done.

25. SHUN Smoking. Cooking with heat and smoke from burning materials such as saw dust, tea leaves, cypress branches, bamboo leaves or granulated sugar.

The Chinese menu

Chinese menu bears no resemblance to western menus which are course wise. The Chinese cooking tradition makes for a greater harmony of living, an aspect of Chinese cuisine which has often been over looked. There is a great feeling of togetherness in the way the Chinese eat. They gather around a table and partake all the dishes which are placed on the table in a communal style. Nobody is served just an individual portion in the western way. The chop-sticks

are used not only as eating implements but also to help others to a choice piece especially from a particular dish this is usually an expression of respect and affection.

Due to the multi course nature of the Chinese meal, eating and dinning have always been very much a family or communal event and Chinese food is best eaten this way, for only then can you enjoy a variety of dishes. An informal Chinese dinner served at home is essentially a buffet style affair, with more hot dishes then cold served on the table at the same time, to be shared by everyone.

A Chinese meal is served absolutely ready to eat there is neither last minute carving on the table, nor dishing out separate item such as meat, vegetables, gravy or sauce and no long prelude when you wait for everybody to be served before you start. At a Chinese meal, as soon as the first dish or course of dishes is placed on the table the host will raise his glass and say -**Gan beill** or cheers or bon appettit.

A SAMPLE MENU

Prawns in garlic sauce

Wonton soup

Stir fried pork with leeches

Beans Sichuan

Apple toffee

CHOCOLATES

Historical background

Cocoa was well known to the classic Mayan civilization which flourished and died in the Yucatan and Guatemala in the 1st Millennium. Alongside deceased Maya dignitaries were buried implements like jars and bowls which were used for making chocolate. They called it Ka-ka-w. Linguistics believes that the Maya's probably learnt to use the product from the earlier Olmec civilization which flourished between 1500BC to 400BC.

The beans became a commodity for trade, an object of warfare and also a currency. The Mayans spread the chocolate far and wide to the west of Yucatan where the Aztec established their power. In due course Cocoa became a major source of wealth of the Aztec. To the Aztec chocolate was the drink for the warriors and the elite. Chocolate lent itself to flavour mixtures like maize flour and herbs. It was offered to the Gods and was used to anoint new born children on the forehead, face, fingers and toes.

It was, only, under the invader Cortez, when the Europeans, first learnt the full value of cocoa. Its new name -chocolate appears to be a Spanish inspired blend of Maya and Spanish. The word was soon applied to all products of cacao. As a commodity of trade cocoa beans began to reach Spain in 1558. As an expensive exotic spice Chocolate was gradually introduced to the rest of Europe. By the 17th century the Italians experimented with new flavourings for chocolate including musk, jasmine, citron and lemon peel. In 1659 A. D. David Chaliou was granted a monopoly for selling chocolate throughout France. Chocolate was first sold in London in 1657

By the end of the 18th century there had been a perceptible increase in the amount of chocolate being consumed in stabs, in ices and sorbets, as an ingredient in desserts and main dishes and in pastas and soups.

It was in 1828 that a Dutchman -Van Houten patented the screw press which removed 2/3rd of cacao butter. The residue so obtained was known as Cocoa. This dispersed easily in water and was considered to be more digestible.

Mr. Van Houten, also developed an Alkalizing process by treating cocoa during processing with potassium carbonate which led to a milder flavour and darker colour.

By adding the excess cacao butter to ground beans created a smooth paste which could be moulded and remain solid when cool yet melted easily in the mouth. By 1842 Cadbury Bros. was

selling block chocolates. By 1847 Fry were marketing chocolate délectueux à Manger. Major contributions were made by Swiss for e.g. In 1880 Randolph Lindt increased the amount of cocoa butter in his formula and developed CONCHING. In 1876 Daniel Peter produced the first milk chocolate.

SOURCES

The Cocoa tree provides with its seed the raw material for making chocolate. The scientist 'Linnacus' assigned the species to a botanical genus, which he named 'Theobroma' – food of the gods. Botanically the leathery fruits are giant berries or pods.

In this genus 22 species are now recognized, all native to central and South America, of these two are cultivated. Of greater importance is 'Theobroma Cacao' from which nearly all the world's chocolate is produced. Cacao is the term for the tree and for its seeds corrupted to cocoa in English.

It is now cultivated all over the world within an area of 20 degrees on both sides of the equator. This tree requires shade when young and is susceptible to fungi and pests. There are many varieties however the Forestero variety accounts for 80% of the world production.

Cacao flowers are pollinated by a species of Midge and grow directly on the trunk of the tree. Only a few flowers develop into fruit or pods and average yield annually being 30 per tree. Full grown fruits are about 8 inches (20cm) long and 4 inches (10 cm) across in an oblong shape. The green pods when ripe are saffron, yellow or red in colour and contain on an average 30 to 40 seeds, occurring in rows and embedded in a white or pinkish pulp.

West Africa is now the largest producer of Cacao and produces over 60% of the world's production.

MANUFACTURE & PROCESSING OF CHOCOLATE

Ripe pods are collected, split and the contents scraped out. The seeds and the surrounding pulp are exposed to the sun allowing the pulp to ferment. This fermentation process is completed in 5 to 7 days. Fermentation is essential for the development of good flavour, for use in the making of chocolate. Fermentation develops 'flavour precursors' breaking down sugar to

glucose and fructose and turning some protein into free amino acids and smaller peptides. After fermentation the beans are dried and exported to manufacturers. They lose 50% of their weight on drying and the yield of a single tree is approx. 500 gms to 1 kg.

At the manufacturers a complex process of roasting and grinding turns the seeds into chocolate mass i.e. cocoa and cocoa butter. These two are mixed in varying proportion to form chocolate. Chocolate that contains a very high percentage of cocoa butter and is known as CHOCOLATE COUVERTURE.

Before preparing chocolate for dipping, moulding, coating, sauces, etc. they must be stabilised or tempered.

TEMPERING

Before preparing chocolate for use they must be stabilised or tempered. This process applies only to genuine chocolate containing very high cocoa butter or chocolate couverture. Cocoa butter consists of different fats, some melt at low temperatures others at higher temperatures those with lower melting points are the first to solidify on being cooled giving chocolate an undesirable grainy texture. It is the high melting point fats that give high quality chocolate its shine and snap. The objective of tempering is to distribute these fats evenly by creating very fine crystals evenly throughout so that it becomes smooth, sets evenly and quickly.

Tempering consists of 3 stages:-

1. Melting: Chocolate couverture must be melted over a Bain Marie to 49°- 50° C (120-122°F) at this temp all fats would have melted, it should be stirred constantly to evenly distribute the fats.
2. Tempering: When the chocolate has melted it is removed from the Bain Marie on to a marble top and stirred constantly to about 29°C (84°F). The object of this process is to seed the mixture with cocoa butter crystals of a uniform and stable type which will keep well during storage. At this point nuts, fruits, etc. may be added.
3. RE-WARMING: After tempering and cooling, if the mass is too thick for using it must be rewarmed over Bain Marie till it reaches a temp of 29°C(84°F). This step must be done

carefully for if the temperature rises to 44°C or 111° F the chocolate is no longer tempered, it SEIZES i.e. it goes hard and grainy.

Chocolate which has not been tempered will take excessively long time to set and its texture will not be good. Also some of the cocoa butter will float and then set making a whitish coating called the 'BLOOM'.

CHOCOLATE MAKING

Manual: Chocolates can be made by hand dipping, the centres being lowered on a special dipping fork into molten chocolate, covered and then deposited on paper to set. It is a skill which takes years to master and is a method used mainly by craft confectioners, who wish to produce high quality individual chocolate selections.

AUTOMATED:

There are two automated methods:-

- a) **Enrobing:** It is a method in which the centres are transported under a curtain of molten chocolate and then allowed to set.
- b) **Shell moulding:** Molten chocolate is deposited into moulds to form a shell which is then filled. A lid of chocolate seals the filling in before it is de moulded.

Hand Moulding: This is done using moulds made of plastic, metal or rubber which must be kept clean and dry as well as smooth. Molten chocolate is then deposited by hand into moulds to form a shell which is then filled and covered by a layer of molten chocolate and allowed to set. Chocolate shrinks when set thereby pulling it away from the moulds so it can be easily de moulded.

TYPES OF CHOCOLATE:

TEMPERED Chocolate is used for dipping, making moulds, pastries, cake icings, cookies and meringues.

LIQUEUR CHOCOLATES can be made by shell moulding or by depositing the syrup into impressions made in trays of starch & left undisturbed for some time, the syrup -crusts forming sugar crystals and can be lifted out and enrobed.

TRUFFLES: Are based on a ganache flavoured with spirits, essences and nuts.

WHITE CHOCOLATE is made by using only cocoa butter

Block Chocolates

Cocoa powder Cocoa powder is made by dehydrating cocoa mass.

Drinking Chocolate: is made by dehydrating prepared Chocolate into powdered form.

Chocolates contain Phenylethylamine a naturally occurring substance in the brain which stimulates euphoric feelings. It also contains THEOBROMINE a stimulant which acts on the muscles and Caffeine, but in much smaller quantities.

YIELD is 600 calories per 100 gms.

CUISINE OF GREAT BRITAIN

Great Britain lies to the northwest of [Continental Europe](#) and east of Ireland. It is separated from the continent by the [North Sea](#) and by the [English Channel](#), which narrows to 34 kilometres (21 mi) at the [Straits of Dover](#). It is situated between longitude 50°N to 61°N and latitude 8°W to 2°E and occupies an area, of 209,331 km² (80,823 sq mi), approximately. The North Channel, Irish Sea, St. George's Channel and Celtic Sea separate the island from the islands of Ireland to its west. Geographically, the island is marked by low, rolling countryside in the east and south, while hills and mountains predominate in the western and northern regions. Great Britain comprises of England, Wales and Scotland on the island of Great Britain, while the United Kingdom includes Great Britain as well as Northern Ireland.

ENGLAND

England is a country which historically has been invaded by successive waves of different people right from Celts, Picts, Romans, Vikings, Saxsons, Normans, etc., right from ancient times, and all of them have left a mark on the English kitchen. In recent times immigrants from West Indies, Asians, especially from Indo-Pak has turned contemporary cooking across Britain to reflect its multi cultural society with its vast array of ingredients and culinary skills imported from around the World.

The English have a reputation of generous meat consumption, some of the traditional meat dishes are: mixed grill, Lancashire hot pot, Roast beef with Yorkshire pudding, beef steak with oyster sauce beef and kidney pie and Sheppard's pie. Ham and sausages are an important part of the diet, famous Hams are York Ham and Black Braden ham.

The large consumption of meat encouraged the development of interesting accompaniments like Cumberland sauce, red currant jelly, pickled walnuts, numerous chutneys and pickles. Poultry dishes include stuffed chicken, stuffed duck and stuffed turkey. Stuffed Turkey is the speciality for Christmas along with cranberry sauce, bacon and chipolata sausage.

Amongst vegetables potatoes are a complete favourite and feature in a vast array of dishes. Peas, fava beans, asparagus, parsley, watercress, cabbage and parsnips are other commonly used vegetables.

British also consume large amounts of fish e.g. Dover Sole fried in butter; mackerels served with gooseberries and baked crabs dressed in their shells.

Regional specialities

*Hindle Wakes from Lancashire is chicken stuffed with prunes and herb flavoured herbs, cooked with vinegar and glazed with a lemon cream sauce.

*Toad in the hole is a dish of sausages baked in batter.

*Angles on horseback are bacon wrapped oysters grilled and served on croutons.

*Black puddings are blood puddings from Lancashire.

The English are known for having a heavy Breakfast and would include selection of juices, eggs to order, grilled mushrooms, bacon and sausages, selection of breads, jams and preserves and of course Tea.

Afternoon tea is a characteristic meal of the English and may include scones with strawberry jam, sandwiches, teacakes, muffins, buns, crumpets and ginger and brandy snaps.

Cakes include the famous Victoria sponge cake and the traditional Sinner cake and marzipans. Puddings are very popular and include desserts like Cabinet pudding, Prince Albert pudding and bread and butter pudding.

Cheeses are a favourite after meals and are accompanied with cream crackers, some famous cheeses are Stilton blue veined cheese, Cheddar cheese. Beer is the all time favourite beverage.

SCOTLAND

Scotland lies to the north of England and although being surrounded by sea on all three sides it still has the resources of the mountains, the mild lush farmlands as well as the sea. Scotland's fine cooking has more in common with France than its neighbour England.

Breakfast and High Tea are elevated to full hearty meals, breakfast is served with bannock- a griddle baked flat bread made from barley and oats or baps a traditional soft breakfast roll, or Dundee cake a rich buttery Scottish fruit cake containing sultanas, ground almonds and candied peel, Dundee marmalade, porridge, lightly poached kippers and eggs. High tea would feature hot or cold savoury dish followed by a sweet pudding or fruit pies or cakes or scones. The favourite dish is Scotch eggs made of ground sausage meat wrapped around a hardboiled egg which is coated with breadcrumbs and deep fried until golden.

Fresh fish is readily available anywhere in Scotland, traditionally herrings, herring's roe cakes, trout are enjoyed fried in oatmeal. Shellfish dish includes Limpet stovies which is shellfish stewed with sliced potatoes. Pratan Bree is crab soup made with cream and rice.

Meat dishes include Scotch broth made from cured lamb, hotchpotch is a stew made from neck of lamb and vegetables, haggis is an offal sausage, cock-a-leekie is the famous chicken and leek dish cooked in beef stock with prunes and herbs.

The Scots love strong flavoured vegetables like rutabaga and turnips. The famous dessert of Scotland is cloutie dumplings which is a spiced boiled pudding with dried fruits. Cheddar is the most famous cheese from Scotland. Whiskey is the national passion of Scotland.

WALES

Wales is situated to the west of England and its cuisine is based on the agricultural lifestyle prevalent in rural households. The day starts with a hearty breakfast followed by a substantial main mid-day meal and a relaxed supper.

Wales has the seaweed named LAYER which is hand gathered and sold ready cooked in markets to be made into cakes or Layer bread which are fried and served with bacon for breakfast. Mutton is the favourite meat and is traditionally cured and served with prune sauce and black currants. Leeks, potatoes, carrots, Swede and cabbage are the commonly served vegetables.

Specialities of Wales is the Welsh rarebit a savoury snack of melted cheese grilled on toast, Glamorgan sausage which is made from cheese, breadcrumbs, leeks, and mustard and is served grilled or fried. The famous cake of Wales is the Bara brith which is a yeast fruit loaf.

IRELAND

IRELAND is an island situated to the west of England and unlike the rest of western Europe remained free of Roman influence and remained true to the ancient Celtic culture. The food and cooking of Ireland is based on the simple use of good ingredients in heavy peasant style dishes.

The staples of Irish diet were cereals like oats, barley, wheat and rye, and dairy products. Potatoes when introduced readily substituted cereals, especially amongst the poor so much so that in the mid 19th century failure of the potato crop caused the great potato famine. Other popular vegetables are cabbage and leeks. Ireland produces a lot of dairy products including excellent cheeses.

Ireland has an extensive coastline and is known for excellent seafood like cockles, mussels, scallops, Galway oysters, Dublin Bay prawns, mackerel, Irish salmon and trout. Carrageen whose scientific name is Chondrus crispus also known as Irish moss is a species of red algae which is used for its setting properties. Sloke the Irish name for laver and is the same seaweed used by the Welsh is also cooked in Ireland.

Traditional meat dishes include Irish stew made from lamb, onions and potatoes, Limerick ham is a traditional smoked ham which may be boiled and baked. Dublin coddle is a hearty stew of sausages and bacon. Soda bread is the local favourite made using buttermilk and soda bi-carbonate, they are slashed with a deep cross on the top, this soft bread rises high and tastes wonderful when warm.

A Sample menu

Scotch broth

Roast beef

Yorkshire pudding glazed carrots and turnips

Roast potatoes

Apple crumble

Icings

Icings or frostings are sweet coatings for cakes and other baked goods.

Icings have three main functions:-

1. They improve the keeping qualities of the cake by forming protective coatings around it.
2. they contribute flavour and richness
3. They improve appearance.

There are seven basic kinds of icings:-

1. Fondant
2. Butter cream
3. Foam Type icing
4. Fudge type icing
5. Flat type icing
6. Royal or decorators icings
7. Glazes

Fondant

Fondant is sugar syrup that is crystallized to a smooth creamy white mass. When applied it sets up into a shiny, non-sticky coating.

Fondant is prepared by dissolving 500gms of granulated or cube sugar in 150 ml of water and 15 ml of glucose and then allowed to boil gradually till it reaches the soft ball stage 112°-116 °C (234-240°F) which may be tested by dropping a little syrup in iced water where it will form a ball under water but lose its shape immediately when it is exposed to air. The syrup must be cooled immediately and the air bubbles then subside.

The syrup is, then, poured out into a cold surface and worked first with a spatula until it turns from a clear liquid to a white crumbly solid. It is then kneaded by hand until smooth and finished by being left to ripen in a cool place for at least 12 hours.

The object is to produce minute crystals in a super saturated solution of sugar giving a –creamy texture to the finished product.

Uses:

- ❖ For first coating on fruit cakes before applying Royal icing.
- ❖ For dipping fresh fruits to make confections for immediate consumption.
- ❖ For casting into moulds.
- ❖ Pastel coloured icing for cakes

Butter Cream Icings

Butter cream icings are light smooth mixtures of fat and icing sugar. They may also contain eggs to increase their smoothness or lightness. This icing is very popular and is used for covering many kinds of cake.

They are easily flavoured and coloured to suit a variety of purposes.

There are four types of basic kinds of butter cream:

1. Butter icing is made with butter and icing sugar which are creamed together to the desired consistency and lightness.
2. a) Simple butter cream are made by creaming together fat and sugar to the desired consistency, a small quantity of egg white may be whipped in to obtain the desired lightness.
b) Decorators butter cream is a simple butter cream used for making flowers and other cake decorations. It is creamed only a little, because if too much air is incorporated, it could not be able to hold delicate shapes.
3. Meringue type butter creams are prepared by first beating egg whites and adding a boiling syrup or just sugar. Soft butter is then mixed into the meringue. This is a very light smooth icing.
4. French butter creams are similar to above but the mixture is made with whole eggs, and boiling syrup. This is a very rich, light icing. N.B. Unsalted butter is the preferred fat for butter creams because of its flavour and melt in the mouth quality.

Recipe for: Butter icing

- i) Beat 125 gms. of butter add 125 gms. of icing sugar with 30 gm of milk and flavouring. Beat until creamy and smooth.
- ii) Butter cream or crème au beurre.
Place 2 egg whites and 125gm of icing sugar in a mixing bowl and whisk until mixture holds shape. Cool slightly. Cream 125 gm butter until soft then beat in the meringue mixture a little at a time. Flavour or colour as desired.

Foam type icing

They are also known as boiled icings. They are simple meringues made with boiling syrup and may also contain gelatine as a stabilizer. Foam type icings should be applied thickly to cakes and left in peaks and swirls. These icings are not stable and should be used they day they are prepared.

Flat type icings

These icings are also known as water icings and are mixtures of confectioners' sugar, water, sometimes corn syrup and flavouring. They are used for coffee cakes, Danish party and sweet rolls.

They are a simple mixture consisting of five pounds of powdered sugar 300ml water, 200 ml corn syrup and flavouring as desired. Egg white may also be added to lighten the frosting.

Fudge Type icing.

Fudge type icings are rich cooked icings. Fudge icings are heavy and thick and they may be flavoured by a variety of ingredients. They are used on cup cakes, layer cakes, loaf cakes, sheet cakes, etc.

To store fudge icings they must be properly covered with cling flim and then kept in an airtight container in the refrigerator.

To use stored fudge icing, warm in a double boiler until it is soft enough to spread. They are stable frostings which hold their shape well on cakes and cup cakes.

CHOCOLATE FUDGE FROSTING

Sugar	–	450 gms
Glucose or corn syrup	-	150 gms
Water	-	120 ml
Butter	-	150 gms
Sugar pwd	-	375 gms
Cocoa pwd	-	175 gms
Vanilla essence	-	to taste

Method

1. Combine granulated sugar, glucose and water and boil till 116°C.
2. Sift powdered sugar and cocoa together, cream sugar/cocoa with butter till light and fluffy and gradually add syrup and essence and blend well.
3. Use immediately while still warm and spreadable.

Royal Icing

This icing is the traditional covering for Christmas and wedding cakes, and is made from icing sugar beaten with egg whites and lemon juice; a teaspoon of glycerine may be added. In the hands of a skilled confectioner this can be used to produce perfectly flat smooth surfaces or piped into intricate borders, patterns or trellis work, which are very fragile but very hard when set. It is always applied over a layer of marzipan or fondant.

The recipe for royal icing needed for 6 inch round or 5 inch square cakes is as follows.

- | | | |
|----|-----------------|------------|
| 1. | Egg whites | 2. No. |
| 2. | Icing Sugar | 500 gms |
| 3. | Lemon juice | 1 Teaspoon |
| 4. | Glycerine | 1 Teaspoon |
| 5. | Cream of tartar | 2.5 gms |

Method:

- ❖ Beat the egg whites with a fork until frothy
- ❖ Gradually beat in 1/2 the icing sugar, using a wooden spoon (+ Lemon juice and cream of tartar)
- ❖ Beat in the remaining icing sugar with the glycerine
- ❖ Beat thoroughly until smooth and white, and having a consistency that stands in soft peaks.
- ❖ Add colouring if required.

- ❖ Cover the bowl with a damp cloth and leave it to stand for several hours to allow bubbles to escape. Before using stir well with wooden spoon but do not over beat.

The icings mentioned below are similar to Royal icing.

Sugar paste or Moulded Icing

Beat one egg white and 15 ml glucose gradually adding 500gm icing sugar to form a still paste. Turn onto a surface sprinkled with corn flour and knead until smooth. Wrap in cling film and keep and keep in a plastic bag to prevent it from drying, will keep refrigerated for 6 weeks. This quantity is sufficient to cover 8 inch round cake.

SATIN ICING

Boil together 50 gms of butter + lemon juice + dissolved 250 gm of icing sugar and cook for 2 min. Remove from heat and beat in another 250 gm of icing sugar till stiff. Gradually mix in another 175 gm of icing sugar and knead until smooth preserve as above.

GLAZES or GLACE

Glazes are thin glossy transparent coatings that give shine to baked products and help prevent drying. The simplest mixture for this purpose is a syrup made from 250 gms of icing sugar in 30 ml of water or milk. They are brushed over small cakes or poured to give a smooth finish.

Syrup glazes may contain gelatin or corn starch. Fruit glazes, the most popular being apricot are made by cooking them till they melt and then forcing them through a strainer.

Ganache may also be considered as an icing

GANACHE

A flavoured cream made with chocolate and fresh cream, sometimes with butter added. It may be used as a sauce, or to glaze a cake or it may be whipped and used a filling and/or icing. Ganache can also be made of stiffer consistency, chilled and rolled into truffles or as topping for petit fours. It was created in Paris round about 1850

Method:

Bring 100 ml of double cream to the boil. Remove from heat and add 225 gms of plain unsweetened chocolate broken into even squares. Stir until the chocolate has melted and is thoroughly combined with cream. Leave until cool but not set then whip until pale, thick and light or before whipping it may be poured over cakes as chocolate icing.

Toppings are anything that is used to cover a cake or a pastry and it may be fruits, jam, nuts etc. and **Icings** are that part of toppings which are sweet coatings that may be applied to cakes and pastries.

RULES For selection of icing

- ❖ The flavour texture and colour of icing must be compatible with the cake.
- ❖ In general use heavy frosting with heavy cakes and light frosting with light cakes. e.g. Angel food cakes with simple flat icings. High ratio cakes with butter cream or fudge type icings. Genoese sponge with French or meringue type icing.
- ❖ Use the best quality flavourings and use them sparingly.
- ❖ The flavour of the frosting should not be stronger than the cake.
- ❖ Use colour sparingly, light pastel shades are more appetizing than loud colours.

Mexican Cuisine

The land of Mexico stretches from the arid border land with the USA to the North to the tropical Jungles of the Yucatan bordering Guatemala to the South from the humid coastline on the Gulf of Mexico on the East to the drier Pacific coast.

Mexico has been home to number of great civilization that are thought to date back potentially as far back as 40000 years. These civilizations advanced greatly over the centuries. However these native cultures of this area of the Americas did not have a written language and thus many of the specifics of their History are not known.

The arid north was sparsely inhabited by nomadic tribes who were hunter gatherers who lived off the land. The original inhabitants of Mexico include the Olmecs, Toltecs, Lapotecs, Jotonais, Mayans and Aztecs.

The great Aztec civilization contribution was the cultivation of maize which together with red beans and rice constitutes the staple food throughout the whole of Latin America. Tortillas (Pancakes made of cornmeal are eaten in a number of ways and is the signature dish/preparations of Mexico).

These cultures thrived on a mostly vegetarian diet because the availability of significant animal food was limited.

The arrival of Spanish in Mexico in the early sixteenth century began a new chapter for the people and cuisine of this culture. After the Spanish arrived the native people incorporated many Spanish elements into their diets including pork, chicken, olives, rice, cinnamon, radish, grapes, sugar cane, stone fruits, wheat, chickpeas, melon and onions. This developed into a distinctive Mexican cuisine which combined the traditions of the natives with that of the Spanish. From the culinary point of view Mexico may be divided into the arid north, the rich central and the thickly forested south.

NORTHERN MEXICO

Northern Mexico comprises of nine areas which are known as the frontier. The Apache, Ute, Chichimec are native to this area. The life styles of the regions inhabitants had a large impact on the development of cuisine. Vaqueros (Cowboys) cooked on the open range over fire pits, Fajitas & Enchiladas are good examples, fresh salsas and guacamole accompanied the food, utilizing garlic, cilantro, tomatillos, lime and chilies native to the region.

Immigrants from Southern Mexico introduced corn based dishes to the regions diet. In coastal areas fish is a large part of the diet. The flavour profile of the region includes smoky, rich yet lean, spicy dishes with garlic, corn and wheat.

CENTRAL MEXICO

The capital of Mexico is situated in central Mexico. Most of central Mexico is a plateau surrounded by highland on all four sides. The rainy season last from May, to September. The remaining months are somewhat dry. When the Spanish arrived it was the Aztec civilization that was ruling Mexico. This is the land of chillies, both fresh and dried. Herbs such as epazote, hoja santa, avocado leaves, cilantro and Mexican oreganos are widely used. Cheese such as queso fresco is used as seasonings and toppings.

Name of some cheeses: Chihuahua, cotija, queso fresco and sardo.

Southern Mexico

Southern Mexico comprises of seven regions of which Tabasco is one (famous for Tabasco sauce). This region includes active volcanoes, pacific lowlands and highlands featuring dense jungles and a tropical climate. The diverse geography and isolated locations led to the development of very different culture and hence cuisine. For e.g. Oaxaca which is quite remote retains its natural heritage. It is noted for its coffee and mescal.

Whereas Veracruz situated on the Gulf of Mexico was a port of choice for explorers and invaders. Veracruz was strongly influenced by Spanish, African and Caribbean culinary traditions. The cuisine has been able to blend the indigenous flavours and ingredients with those of the Mediterranean combining the use of olive oil, garlic, onions, capers and green olives with new world ingredients like jalapenos and tomatoes.

General Notes

The major Mexican meal is taken between 2 to 4 in the afternoon. In its full form it consists of 5 courses: a soup followed by a pasta of rice or noodles, a meat or fish dish accompanied by tortillas, beans and a fruit or dessert with coffee. Mexicans normally have an early light breakfast and later a mid morning breakfast consisting of eggs. Bacon, tomatoes and chilli sauces and of course tortillas. The evening meal except for special occasions is a simple matter of a pastry, fruit and perhaps some leftovers.

SPECIALITIES of MEXICO

TORTILLAS:

Maize remains the foundation of Mexican cuisine eaten in all areas and by all classes. The process for making tortillas starts the night before by boiling dried maize with water and lime, and leaving it to soak overnight. In the morning they drain it and rub the skins off the grains, after which the grains are ground into coarse wet flour, known as Masa or nixtamal. It will then be shaped by hand into flat cakes some 18cm in diameter and 2mm thick. These tortillas are cooked in seconds on a griddle known as -COMAL and are carefully wrapped in a hand embroidered napkin to keep them hot.

This technique of boiling in wood ash or lime and then soaking is known as — Nixtamalization which was discovered by the local natives of southern Mexico and its southern neighbour Guatemala as early as 1500-1200 B. C..

This procedure makes it possible to remove the skin off the grain and allows the grain to be ground to a flour that produces a flexible bread, and renders the protein in the grain more accessible.

Tortillas may be served plain fried or baked, either flat or folded and topped or filled with various stuffing's.

Tortillas piled with savoury assortments are called -tostadas Enchiladas are folded stuffed tortillas, usually topped with a sauce and baked. -Tacos are plain tortillas, stuffed rolled and may be fried. Chilaquiles thin strips of fried tortilla covered with a highly spiced sauce and cooked in the oven.

Mole takes its name from molli, a nahuatl word meaning concoction.

Moles Pobiano De Gajolote- A very famous Mexican dish supposed to have been invented in the 16th Century by the convent of Puebla. They cooked Turkey in a sauce typical of Aztec cooking. The sauce (mole) is traditionally prepared by pounding various sweet and hot chillies such as ancho, mutato and pastitlla, onions, tomatoes, pieces of tortillas garlic, crushed almonds, aniseed, sea same seeds cinnamon, cloves and coriander seeds. The mixture is pounded with a

little turkey stock till it is a smooth paste. It is then simmered with more turkey stock to which lard and plain dark chocolate are added. The cooked turkey is cut into pieces, liberally coated with the sauce, and served sprinkled with sesame seeds, sweet corn or small tortillas. It is served as main course.

GUACAMOLE: A dip or sauce originating in Mexico and consisting of avocado, tomato, onion, lemon juice and spices.

GERMAN CUISINE

Germany is situated North/Central Europe. To the north is the North Sea and to the North-East is the Baltic Sea, West of Germany lies Netherlands, Belgium and France. To the south lies Switzerland and Austria and to the East lies the Czech Republic and Poland.

Germany may be divided into three Culinary Regions, with the German speaking Prussians in the North and east. Saxony in the centre and Wurttemberg and Bavaria, in the south. Culinary specialities from each of these regions are influenced by climate, terrain as well as social status and Germany's history of localised governance.

NORTHERN REGION

In the cold damp North Germany where Dutch, Scandinavian and Polish influences mingle—thick soups, smoked meat and fish are popular, supplemented with dishes prepared from local crops, featuring beets, potatoes, cabbage, barley, hops and rye. Sausages and other charcuterie products are also a staple of the northern diet- e.g. Braunschweiger from the town of Braunschweig is a famous liver sausage. Sweet and soured creamed sauces and soups are very common. Meals are accompanied by beer or schnapps (strong liquor similar to gin).

CENTRAL REGION

This region is an area of rolling hills with wide expanses of forest and numerous spas. This region is basically an agricultural society famous for Pumpernickel and rye breads which are produced from local grains. Dumplings are the staple food of this area a number of varieties are made from potatoes, bread flour or oats. Frankfurter sausages are from this region and are now famous all over the world. Pfefferpotthast, a beef stew strongly flavoured with pepper are popular. Westphalia is famous for its ham and pork dishes. The thriving vineyards of this area produce excellent wine. Stollen is the traditional Christmas made from locally grown fruits and berries.

SOUTHERN REGION

This area includes the states of Bavaria, Swabia, Baden and Alsac-Lorraine. The cuisine of southern Germany features many of the same staples as its other counter parts but the dishes are much lighter. Vegetables including white asparagus, radishes and cabbages are consumed in large quantities here and vegetable salads are very popular throughout southern Germany. The cuisine of Bavaria which is located in south east Germany is influenced by Austria and the cuisine of Alsac-Lorraine situated in south west Germany is influenced by France. Fine wines are produced here. Spätzle a cross between a dumpling and noodle is a popular side dish. Very popular desserts are prepared with such fruits as plums, cherries, apple and berries that are grown in this region. This region is best known for its Schwartzälder Krichtorte also known as the Black Forest cake in English is a cherry cake flavoured with the cherry liquor –Kishwasserll.

Other famous German Dishes are:

Lebkuchen

Lebkuchen is a traditional German baked Christmas treat, somewhat resembling gingerbread.

Lebkuchen were invented by medieval monks in Franconia, Germany in the 13th century. *Lebkuchen* bakers were recorded as early as 1296 in Ulm, and 1395 in Nürnberg (Nuremberg). The latter being the most famous exporter today, of the product that is known as Nürnberger Lebkuchen (Nürnberg Lebkuchen).

Sauterbraten

This is a famous beef dish which involves marinating the meat in wine, vinegar and buttermilk and braising it. It is served with a sweetened sauce

Gansebraten

"Roast goose". Usually stuffed with apples and prunes.

Sauerkraut

Sauerkraut German pronunciation: *zoyerkroyt*, French *Choucroute*, directly translated: "sour cabbage", is finely shredded [cabbage](#) that has been [fermented](#) by various bacteria. It has a long shelf-life and a distinctive [sour](#) flavor, both of which result from the [lactic acid](#) that forms when the bacteria ferment the sugars in the cabbage. It is therefore not to be confused with [pickled cabbage](#) or [coleslaw](#), which receives its acidic taste from [vinegar](#)

Schwarzsauer

It is stew of goose giblets and blood, usually cooked with dried apples, prunes and pears.

A SAMPLE GERMAN MENU

Linsensuppe

Sauerbaaten

Spatzle

German potato salad

Pumpernickir

Apfel Strudel

Italy

[Italy](#) is located in southern [Europe](#) and comprises the long, boot-shaped [Italian Peninsula](#), the land between the peninsula and the [Alps](#), and a number of islands including [Sicily](#) and [Sardinia](#) ([Corsica](#), although belonging to the Italian geographical region, has been a part of France since 1769). Its total area is 301,230 square kilometres (116,310 sq mi), of which 294,020 km² (113,520 sq mi) is land and 7,210 km² is water (2,784 sq mi).

It lies between latitudes [35°](#) and [48° N](#), and longitudes [6°](#) and [19° E](#).

Italy borders with [Switzerland](#) (740 km/460 mi), [France](#) (488 km/303 mi), [Austria](#) (430 km/270 mi) and [Slovenia](#) (232 km/144 mi). [San Marino](#) (39 km/24 mi) and [Vatican city](#) (0.44 km/0.27 mi) are both entirely surrounded by Italy.

For culinary purposes, the country can be loosely divided into the South, Central and North. Northern Italy is bordered by France, Switzerland, Austria and Slovenia. Central and Southern Italy is bordered by the Mediterranean Sea, a position that holds great historical importance in terms of exploration and trade.

The generally rugged and mountainous terrain of Italy is home to a population of 58 million people. Politically Italy is divided into twenty regions and each region is unique in its own way. The culinary diversity, specialties and pride of each region are quite remarkable.

HISTORICAL BACKGROUND & REGIONAL CUISINE

Italy has a rich past, at one time, parts of the country were occupied by Etruscans, Spanish, French, Greek, Arabs, Austrian and Germans. Such occupations inevitably shaped the cuisine of Italy today. Italy was made up of separate and disputing states, till it was unified in 1861 by Giuseppe Garibaldi.

Northern Italy

The Romans who ruled Italy and at one time almost all of Europe, for about a thousand years has left a lasting effect on Cookery in Italy, they brought in a lot of local customs and foods of the countries they conquered. The port city of Venice was the centre of trade with the Middle East. This prosperous city had control over the trade of rare foods of the time like sugar, coffee and spices. Western areas of North Italy like Lombardy and Piedmont have strong French and Swiss influences in their cuisine.

Northern Italy is considered the most prosperous area of the country of which the most famous are the Eastern part of Veneto known as Emilia-Romagna. The cuisine is dominated by meat and seafood. The green pastures produce a lot of milk, butter and cheese, e.g. Gorgonzola and Mascarpone. Fresh Pasta, polenta and rice are consumed in large quantities. Risotto is the staple of the people of Piedmont. Popular cooking techniques include boiling, stewing and braising. They use a special oven called a Fogher that is used for spit roasting.

Popular pasta shapes of this region include anolini, cappelletti, lasagna, tagliatelle tortelli and tortellini. Other specialities of this region is the Parmigiano- Reggiano(Cheese), Prosciutto di Parma (Ham), and Aceto Balsamico Tradizionale(vinegar).

CENTRAL ITALY

The early settlers on central Italy were the Etruscans who migrated from the Asia Minor as early as 800 BC The Etruscans were an advanced civilization with a major empire. The Romans flourished between the 5th Century BC to 5th Century AD) with Christianity at its core. The Romans built an extensive system of roads and a central market. The great Renaissance originated here in this region and the first ever cooking school was founded in Florence. From

the culinary point of view the most significant family in Italy is the Medicis of Florence. It was the Catherine of Medici who single handily shaped the future of Culinary and exported it to France when she married King Henri II.

Central Italy comprises of seven regions of which Roma the capital city of Italy and Christianity is located in the region of Latium. Central Italy is known for its livestock, mainly beef, goat and lamb which are commonly griddled, spit roasted or deep fried

SOUTHERN ITALY

Southern they have been greatly influenced by Greeks and Arabs from North Africa. The regional cuisine began in Southern Italy with the arrival of the Greeks in 415 BC. The Greek introduced wheat cultivation, Bread making, olives, honey and nuts. Romans ruled later but did not contribute much to cuisine except for the introduction of fava beans. Sicily which is at the foot of Italy in only 145 Km from the African continent, and was conquered by the Arabs as early as the ninth century AD They bought in exotic ingredients and planted citrus trees. They also introduced the notion of combining sweet and sour flavours. Saffron, nuts, rice, couscous, sugar cane and ice cream are just a few of the contributions from the Arab world. Olive oil is the preferred fat of the region. Naples at the ankle of the Italian leg is a very historical place; it was the gateway for the entry of Catalan Cookery. Pizza's home is the Neapolitan area of Southern Italy.

The great difference in Italy's climate and geography are favourable to many different agricultural forms. This means that while a superb cheese is produced from Cow's milk in the north, the south has cheese made from sheep's milk which is just as excellent Northern recipes use butter and cream, the central provinces used lard and olive oil and the south is predominately olive oil.

Respect for the basic produce and a feeling for the freshness and quality of the ingredients determines the lively seasonal variety of dishes. As result the range of products on offer is extensive and high in quality. Unadulterated taste and inspired simplicity are the main characteristics of Italian cookery, as well as health and economical attitude towards food and eating habits.

Coffee with B/F is generally consumed by 10am, followed by Lunch or pranzo which is more prevalent in the rural areas where it is a family affair with substantial 3 or 4 courses. More extensive Lunch is saved for Sundays and other special days. The evening meal is eaten around 8 pm which could again be 3 or 4 courses. A midnight snack is quite common

❖ Antipasta is the Italian word for appetizer or starters they are composed of high quality ingredients like olive which maybe raw, pickled or marinated, toasted slices of bread, salads or sausage or ham in thin slices along with melon and figs

❖ **Bread Specialties (PANE)**

1. Bruschetta : toasted slices of bread with garlic, olive oil and tomato.
2. Cilindrati : croissants made from thinly rolled bread dough.
3. Grissini Bread sticks from Turin.
4. Crocetta Hot cross Buns

Another famous specialty of Italy is the Pizza.

e.g. of Pizza alla :-

❖ Napolitana consisting of tomatoes, Mozzarella and anchovy fillets.

❖ Prosciutto Ham

❖ Funghi- Mashrooms

SPECIALITIES OF ITALY

❖ Ham is another specialty. Prosciutto de Parma

Italy's most famous ham comes from the province of _Parmall north-west of BOLOGNA.

The quality of PARMA Hams is created with the pigs being fed on barley, corn and fruit.

When slaughtered it must be at least 10 months old, to ensure that the meat is firm and rosy and surrounded by a thick layer of fat. Raw leg should weigh 10 kgs. It is then brined in three phases and then left to dry. They are then matured for a year in cellars with limited supply of air. After 12 months they are ready to eat.

PASTA SECCA (DRY)

Italians are very fond of dry pasta. There are about 300 diff varieties. Pasta is made from durum wheat semolina and can be divided into three categories.

1. PASTA CORTA : Short noodles and may be many shapes such as spirals, wheels, stars, snails, shells and short tube.
2. PASTA LUNGA : long noodles which include the entire spagethi and tagliatelle family- 4 inch and above.
3. PASTA RIPENNA : filled pasta parcels, fortellini and raviolli are the best known.

Some name of pasta

1. BUCATIN : Long smooth hollow noodles.
2. CANNELLONI : Finger length hollow good for filling
3. PENNE : Short pipes with slanting edges.
4. FARFALLA : shaped liked butterflies.
5. SPIRALE : Spiral shapes
6. TAGLINTELLE : Ribbon noodle.
7. LASAGNE : smooth sheets of pasta

GNOOCHI

They are small dumplings or gruels and are a passion for Italians among a wealth of variations a common type is made with mashed potatoes mixed with milk served with a lots of Parmesan, tomato or meat sauce.

Potato may be replaced with semolina, chestnut flour, cornmeal and even pumpkin.

❖ POLENTA

Polenta is an ancient dish made with any grain be it millet, buckwheat, chickpeas or broad beans. After Columbus bought corn to Europe, it became the staple for production of POLENTA as the Polenta made from corn kernels became the most economically viable grain. Polenta is delicious with rabbit, lamb, game, sausages, cream dishes and fish dishes.

❖ **PARMIGIANO REGGIANO**

The most famous of all Italian cheese, which has been produced using the same method for seven centuries. Produced in stipulated area which are the provinces of PARMA including Reggio, Emilia, Modena and Mantova on the right bank of the river Po and Bologna on the left bank of River Reno. Cows must be grazed on a meadow or are fed on alfalfa.

Milk is poured into traditional bells shaped copper vats. It is then curdled. The curd Cagliate is then again reheated twice at 45°C and then at 55 °C. The resultant mass is removed in Cheese cloth and deposited in wooden or metal moulds. It is then left in salt solutions for 20-25 days. They are then dried in the sun before being stored in the 'CASCINA' on wooden shelves to mature slowly regularly turned and brushed. Two gallons of milk produces a pound of cheese they are hard cheeses.

❖ **PECORINO**

They are produced in south Italy. It is a hard cheese made from sheep's milk and are moulded in basket work cylinders which are woven in SARDINA. When matured the rind is hard and dark. Pecorino Romano is considered the best.

❖ **GORGONZOLA**

Originally only produced in the little town of the same name near Milan. It is made from full cream pasteurised cow's milk. Milk is heated up to 32° C and curdled with rennin. Spores of *penicillium glaucum* are also added. They are poured into round Moulds. It is a blue veined cheese.

A sample menu

Minestrone Andalusia

Ravioli Arabeata

Fettuccini carbonara

Pollo alla cacciatore

Medanzane parmigiane

Tiramisu

MERINGUE

Also known as ‘Foam’ is a very light item of patisserie made from stiffly beaten egg whites and sugar. Meringue became popular in the 6th century and was popularised by the Queen Marie Antoinette who had a great liking for meringues. The use of meringue by piping was invented by Careme. Meringues are made by incorporating enough sugar to both stabilize and sweeten the meringue.

TYPES OF MERINGUES

There are three types of meringues:-

➤ *Meringues ordinaire or common meringues*

Method:-

- *Egg whites must be carefully separated and put in a clean bowl; this must be done carefully so that no particles of the egg yolk must mix with the egg white.*
- *Beat the egg whites until frothy and then start to add the sugar which has been previously ground to a very fine powder, the sugar must be added gradually. Once the sugar is incorporated, whip the meringue to soft, medium or stiff peak, or as required by the recipe.*
- *This type of meringue can be used to top a pie, to pipe and bake into shells or used to create borders and other decorations. Since the whites are not heated to a safe temperature, this type of meringue should be used for applications where it will be cooked by poaching or baking.*

➤ ***Meringue Swiss:-***

Beat 225 gms of egg whites till frothy, add 450 gms of powdered sugar. Beat over double boiler to the desired peak, according to the recipe.

➤ ***Italian meringue***

- *Make sugar syrup using 450 gms sugar and 120 ml of water and boil the mixture upto 116 degrees C.*
- *Beat 225gm of egg white to the soft peak stage.*
- *Add sugar syrup to the egg whites in a thick steady stream whilst continuing to beat.*

- *After all the sugar syrup has been incorporated, continue to beat the mixture to the desired peak.*
- *The end product has a finer grain and is more stable than the other meringues.*
- *Italian meringue may also be used to prepare baked shells, cookies or left unbaked to use as a filling or as the base for Italian butter cream.*

The addition of some other ingredient or flavouring to meringue can create an almost infinite number of variations, eg, Japonaise where ground almond is added. Small meringues are easier to make than big ones. Very small ones are known as meringuettes or croquignols, and is used as petit fours.

Dutch calls them schuimpjes.

Large meringues are called Vacherin.

Rules for making meringues:-

- *Only absolutely clean and dry bowls preferably ceramic, glass or stainless steel to be used for making meringues.*
- *Fat inhibits foaming.*
- *Mild acid like lemon juice or cream of tartar helps foaming.*
- *Egg whites foam better at room temperature.*
- *Do not over beat egg whites for they will look dry and curdled.*
- *Sugar makes the foam stable, but it can also cause weeping because of absorption of water.*

Other examples of meringues are Vacherin, Pavlova and Baked Alaska.

What is ORGANOLEPTIC?

Organoleptic refers to the involving of sense organs in evaluation of foods, it relates to the perception by sensory organs. Evaluating with the senses of sight, taste and smell for foods and is used particularly of the combination of taste, texture and astringency (perceived by the mouth) and aroma (perceived in the nose).

Sensory evaluation is an invaluable tool to Quality Control as well as Research and Development. Customers perceive product quality with their senses, and as a result, organoleptic evaluations are an essential component of any Quality Control evaluations. All of the technical, chemical and microbiological parameters of a product may well be within specification, but if the product fails to meet sensory expectations, or performs poorly against a competitor, product

sales and brand image may well suffer. Organoleptic evaluations can also be used to develop **sensory** profiles when developing new products.

There are three types of testing:

EFFECTIVE TESTING

This type of testing is concerned with obtaining *objective facts* about products. This could range from basic [discrimination testing](#) (e.g. Do two or more products differ from each other?) to [descriptive profiling](#) (e.g. What are the characteristics of two or more products?). The type of panel required for this type of testing would normally be a [trained panel](#).

Methods for collection and statistical analysis of sensory data include [Free choice profiling](#), and [Generalized procrustes analysis](#)

AFFECTIVE TESTING

Also known as *consumer testing*, this type of testing is concerned with obtaining *subjective* data, or how well products are likely to be accepted. Usually large (50 or more) panels of untrained personnel are recruited for this type of testing, although smaller [focus groups](#) can be utilised to gain insights into products. The range of testing can vary from simple comparative testing (e.g. which do you prefer, A or B?) to structured questioning regarding the magnitude of acceptance of individual characteristics (e.g. Please rate the "fruity aroma": dislike|neither|like).

Perception

[Perception](#) involves the [biochemical](#) and [psychological](#) theories relating to human (and animal) [sensations](#). By understanding the mechanisms involved it may be possible to explain why certain characteristics are preferred over others.

Descriptive analysis involves trained panels (6-30 people) who evaluate products by rating the intensity of various characteristics on a scale. Statistical analyses are applied to look for differences among various products for characteristics of interest.

Consumer testing (sometimes called '**hedonic testing**') involves having potential consumers of a product evaluate various products and a small number of items on a **ballot**.

Sensory Evaluation: What is it?

"Sensory" is derived from the Latin "sensus" (= sense) and therefore, "sensory evaluation" is the description and evaluation of food products using the human senses. Accordingly, sensory evaluation is an analytical method in which the human senses serve as a measurement tool to determine the quality and/or to describe the condition of a food product. Prerequisites for the success of this analytical process include: standardization of methods, regular training and performance measurement of testers, a statistical evaluation of test results; and a standardization of terms.

All sensory testing methods are divided into three categories: hedonistic, comparative and descriptive testing. Hedonistic tests are always used within the scope of consumer tests and serve to characterize consumer behavior. On the other hand, comparative and descriptive sensory tests are referred to as "expert tests" because they may only be carried out by trained persons and can give very detailed information about individual product parameters. Selection of a sensory testing method must always take into account the test objective.

One main objective of sensory evaluation is the measurement of sensory attributes and the quantification of the influence of these attributes on consumer acceptance. This aspect is becoming increasingly important because of the interrelationship between enjoyment value and repurchases behavior. Sensory attributes are directly linked to the concept of quality and thereby ultimately contribute to the success or failure of a product.

Organoleptic and sensory evaluation play a very important role in research and development in analyzing new dishes, allows us to understand consumer behavior towards a new dish, facilitates management decision in choosing which new dishes or menus to be introduced, helps management in standardizing menus and dishes and is an important tool for the organization.

SCANDINAVIAN CUISINE

Scandinavian cuisine comprises the cuisine of the countries situated in the extreme North East of Europe and includes Denmark, Norway, Sweden and Finland. These Scandinavian countries share a similar cuisine style and relatively close cuisine development histories.

CULINARY HISTORY

In the 11th-12th century Denmark ruled over Norway and 1389 the Queen of Denmark and Norway became queen of Sweden. Denmark's influence over Sweden and Norway started to diminish in the 19th century, but the food related traditions remained.. Although most European countries consider lunch the main meal of the day, Scandinavian countries place more importance on dinner, which is the most consistent meal of the day. Workers often only have a quick snack for lunch, instead of a sumptuous meal. Many of the cooking styles and dishes used by the Vikings are still present in the Scandinavian cuisine today, and Scandinavians are proud of their Viking heritage, a fact that is also noticed in the way they preserve the authenticity of such foods. The traditional Scandinavian breakfast is very light and fruitive, consisting mainly of some cookies and coffee. Bread is also used, with butter and jam, but in most cases this meal is not considered very important – that's also because Scandinavians usually go to school and work early, at 8 o'clock. Lunch is richer in nutrients than breakfast, but most Scandinavians don't place all that much importance on it – a quick snack or a sandwich will do in most cases. Dinner, however, is served early, around 6 PM, and it is the main meal of the day. All Scandinavian countries see dinner as a family event, where all the members of the family return from school or work and enjoy the meal together. A Scandinavian dinner usually consists of a soup to start and a fish or meat dish for main course. Desert is sometimes served, but it is not a daily dish. Of course, the different Scandinavian countries also have slightly different eating habits. Danes and Norwegians only eat one hot meal a day while Swedes eat more hot meals each day. The cold smorrebrod is usually the lunch of the Danes and Norwegians, while in Sweden children return from school home, around 11 AM, for a hot lunch. A similar custom to the traditional English tea exists in the Scandinavian Peninsula – Scandinavians serve bread, biscuits, cookies, pastry and coffee around 2-3 PM. As for drinks, beer and snaps are enjoyed with the food and dry sherry. Each traditional dish has a special cooking method, which is more or less general in all of the

country's regions. Meat is one of the main elements of most Scandinavian dishes and Herring is extremely popular, together with other fish types. Salmon is abundant in the area of the Peninsula, and it constitutes a very popular dish, both on a local and international level. Cold food is often eaten viciously, or "consumed" in the Scandinavian region - smorgasbord is a buffet table consisting mainly of cold dishes of herrings, fish, meat, salad and cheeses. The smorgasbord is accompanied by slices of buttered bread and it constitutes one of the most frequent meals in the Peninsula. Smorgasbord begins with cured herrings and cold fish and meat dishes including roasted meats follow, together with hot or cold vegetables and a salad. Scandinavian dishes are still prepared, even by modern chefs, in the traditional way – using simple tools and basic ingredients, but utilizing them to the maximum, so as to create a delicious and nutritious meal. Whether you are cooking Swedish meats and balls, or "meatballs" the Danish Leverpostej (rough-chopped liver paste served on dark rye bread) or the Norwegian smoked salmon, you will notice that the Scandinavian cuisine produces excellent results with simple and fast cooking methods. Festivities are moments of joy, when the family comes together in all the Scandinavian countries. Christmas is one of the most important holidays of the year. Food is very important on Christmas and on the smorgasbord or dinner table you can expect to find dishes such as: rice pudding, Christmas Ham, stockfish, Herring, cheese and bread, meatballs, small frying sausages, red cabbage, liver pâté, Veal brawn, spare ribs and the list goes on. Easter is also festively celebrated, although less stress is placed on the culinary aspect, as the religious aura tends to dominate the celebrations.

NORWEGIAN – the cuisine is characterized by a sense of practicality and economy. Norwegians love their meat, whether it is Pork, Veal or fish meat, and you will notice that most of their dishes are concentrated on this main ingredient. The vast wild areas of Norway, and the abundance of fish and game, make such natural food resources a top pick for many traditional dishes. Norwegian cuisine uses elements from various cooking traditions borrowed from their neighbours and developed from their own traditional dishes. The simplicity of the cuisine does not imply a lack of taste, but it does make life easier for the cook. Smoked salmon is probably the most famous type of food product related to Norway; other dishes are **ROMMEGROT**-porridge made with sour cream, milk, flavoured with cinnamon and sugar, **FARIKAL** mutton

and cabbage stews with black pepper, **PTARMIGAN** meat casserole with cranberries and smoked elk.

DANISH – the cuisine of Denmark is characterized by high levels of meat and animal fat and a rather low level of plants and vegetables. The long winters from the Scandinavian Peninsula shaped the face of the Danish cuisine. Although agriculture is well developed, due to the climate, game and fish are often preferred. Fresh vegetables are rare in the traditional Danish recipes, and many dishes rely on seasonal fruits or vegetables. On the other hand, the climate enables lengthy meat preservation, so smoked meat is one of the most frequently used ingredients in the Danish cuisine. The Danish cuisine is rather conservative, and the numerous islands that form Denmark helped keep the traditional, conservative cooking styles alive until modern times. Some specialities are **FRIKADELLER** minced veal and pork meatballs, **HAKKEBIFF** minced beef with onions and brown sauce and **RULLEPOELSE** spiced rolled belly of pork. Vegetables used are potatoes, red cabbage and rutabaga. Danish pastries are very famous they may be filled with cream, jam or dried cherries.

SWEDEN – It is considered rude not to finish the food you have on the plate, mainly because, in many cases, you serve yourself and you are responsible for the amount of food you place on your plate. The meals are not very elaborate and many will find them scarce in vegetables. Traditional recipes were influenced by the lack of plants due to the long Swedish winters and many modern dishes still include only small amounts of vegetables. Rutabaga is a native turnip that was among the most popular plant types in Swedish cooking until it got replaced by the Potato. In both major inhabited regions of Sweden – Gothenburg on the west coast and Stockholm on the east – the abundance of fish, mainly Herring, had its influence on traditional cooking. Some specialities--- **SLOTTSTEK** braised beef served with cranberries and potatoes, **LINDSTROM** minced beef served with beetroot. Goose is served stuffed with prunes and apples. Sweden has a wide range of pastries flavoured with saffron and cardamons.

FINLAND--- Finnish cuisine is characterised by foods with robust flavours, like— **MUSTAKEITTO** a rich soup made of chopped offal cooked with carrot and potatoes, is thickened with blood and garnished with barley balls. **VORSHMACK** a hash of mutton, beef and salted herrings, spiced with garlic and onions and accompanied by **RYPPY** a very strong

grain alcohol. The Finns are fond of Swedes, smoked reindeer tongues, raw salmon, burbot roe, crayfish cooked in stock flavoured with fennel and LAKKA a strong liqueur based on Arctic cranberries. Milk is used in the form of buttermilk or in puddings and porridge. Wild mushrooms are widely used in soups, stews, sauces, pickles and salads. The Russian influence is significant with borscht, pashka and blinis being common dishes.

Staling of Bakery Products and Mold Infection

There are three ways in which bakery products stale. They are, Starch Retrogradation (firming of the crumb), getting infected by molds and rope; See Below.

In simple terms, staling of crumb (firming of crumb) is the process the starch molecules go through when they shrink upon cooling. Starch molecule consists of a very long chain of Carbon, Hydrogen and Oxygen that are stretched out when warm and feel soft. Upon cooling, the chain shrinks and thus become firm which is called staling. You have probably experienced that when a stale product is warmed, it becomes soft. The starch chain has stretched again. Upon cooling, it shrinks again and become firm.

Anti-Staling Ingredients:

1. Emulsifiers. For the past several years bakers used emulsifiers called bread softeners to produce bread that will remain soft for a longer period of time. It is added to the dough during mixing. Some of the more common ones are monoglycerides, calcium stearoyl lactylate, and sodium stearoyl lactylate. The softening action takes place after the bread is baked. Also, Potato bread will resist staling because potatoes act as anti-staling ingredients to some degree. Some anti-staling ingredients also perform as dough conditioners or dough strengtheners.

2. Enzymes. Enzyme manufacturers are hard at work on genetic engineering and protein engineering producing enzymes to extend the shelf life of bread many fold. In a paper presented at the 1999 American Society of Baking's Annual Convention, it was stated that some of these enzymes are available now. However, since every baker wants to have one better, enzyme manufacturers will continue to work on developing better ones. It was also stated that there is a

lag time of between 2 and 3 years between the time a specific enzyme is identified and actually having it available for the baker to use.

Advantages of Using Enzymes instead of Chemicals. Since enzymes are produced from natural ingredients, they will find greater acceptance by the housewife than when chemicals are used.

3. Mold and Mold Inhibitors. Sanitation plays a very important role in preventing mold in bread. Mold spores do not survive baking temperatures. The interior of the loaf, when it comes out of the oven is about 210 to 212 degrees F. which will destroy any mold spores which may be present in the dough. Therefore, bread and other bakery products can only be contaminated after they leave the oven.

Some of the more dangerous areas for mold contamination are storage rooms, and slicing machine blades which come in direct contact with the interior of the loaf where there is an abundant supply of food and moisture. Mold spores also thrive in dark places. You can extend the length of time that it takes bakery products to mold by several days by using Mold Inhibitors such as Calcium Propionate for yeast raised doughs and sodium propionate in chemically leavened products. Propionates are present in many foods, but in very small amounts. Swiss Cheese, however is an exception. For this reason, Swiss Cheese rarely molds, unless it is improperly developed. Propionates may be obtained by the oxidization of propyl alcohol, forming propionic acid. The propionic acid is in turn combined with other chemicals to form the well known Sodium and Calcium propionates sold under different Trades Names. Mold Inhibitors react as an alkaline in doughs, and since yeast doesn't like an alkaline condition, Mineral Yeast Foods containing monocalcium phosphate are added to the dough. Monocalcium Phosphate reacts as an acid in doughs therefore counter-acting the alkaline which is formed by the propionates. Also, vinegar can be used at the rate of about 1 pint per 100 pounds of flour. Inhibitors are called inhibitors, because not enough is used to kill the mold. They only retard the growth of molds. Bread will mold eventually if kept in a warm moist environment. The amounts of Calcium Propionates to use in bread varies with the climate, season of the year, or type of product. Dark Breads require more than White Breads. For average climates, 2.5 to 3.5 ounces are used per 100 pounds of flour in White Breads and 4.0 to 5.0 ounces are used in Dark Breads.

Types and Color of Molds. There are many different types of molds and they have different colors. Mold spores are practically everywhere, because they are very tiny and are carried in the air. They are so tiny that they can only be seen under a microscope. Mold Spores are like seeds that you plant in the garden. When they come in contact with the proper food, moisture and warmth, the spores produce mold plants which you can see with the naked eye.

Rope. Rope is a bread disease caused by the bacteria, *Bacillus mesentericus*. This disease breaks down the cells of the bread and leaves a sticky, pasty mass. When the crumb is pressed together, and pulled apart, it will stretch into long, sticky, web-like strands. The product will have the odor of over-ripe cantalope. The rope bacteria are too small to see with the naked eye, but they can be seen with a microscope. The bacteria can be present in the ingredients, especially flour and yeast. Unlike mold, rope spores are not destroyed by baking temperatures. Calcium propionate, sodium diacetate or one pint of vinegar per 100 pounds of flour can be used in bread doughs to increase the shelf life of the product. If the bakery is contaminated, thorough cleaning with special chemicals will be necessary and/or the bakery may have to be steam cleaned.

External Bread Faults

Symptom	Causes
Crust too dark	<ul style="list-style-type: none"> - Oven temperature too high - Excessive milk or sugar. - Excessive baking time. - Over proofing.
Crust too light	<ul style="list-style-type: none"> - Oven temperature too low. - Insufficient milk or sugar. - Insufficient baking time. - Insufficient proofing. - Insufficient mixing.
Crust broken	<ul style="list-style-type: none"> - Insufficient proofing - Insufficient liquid.
Crust too hard	<ul style="list-style-type: none"> - Oven temperature too high - Insufficient proofing.

	<ul style="list-style-type: none"> - Insufficient sugar or shortening. - Excessive steam. - Insufficient liquid. - Baking time too long.
Crust too soft	<ul style="list-style-type: none"> - Oven temperature too low - Excessive sugar/egg yolks/shortening. - Excessive oil/margarine as a wash. - Insufficient steam during baking. - Baking time too short or wrong bread machine setting.

Internal Bread Faults

Symptom	Causes
Coarse and irregular grain	<ul style="list-style-type: none"> - Improper mixing procedures. - Stiff batter. - Careless or poor depositing in the pans. - Oven too cool, (baked too slowly).
Dense grain	<ul style="list-style-type: none"> - Excessive liquid in the batter. - Improper mixing procedure.
Off-color breads	<ul style="list-style-type: none"> - Improper mixing procedure. - Oven too cool, (baked too slowly). - Unclean equipment.
If raisins, nuts or dried fruit sunk to the bottom	<ul style="list-style-type: none"> - Pieces of fruit were too large and too heavy. - Sugary syrup on the outside of the fruit was not washed off- causing the pieces of fruit to slide through the mixture as it heated. - Washed and dried fruit was not dusted with flour before being added to the mixture. - Bread mixture was over beaten or was too wet so it could not hold the fruit in place. - Oven temperature was too low, causing the mixture to melt before it set to hold the fruit in place.

General Bread Faults

Symptom	Causes
Batter over-flowed the pans	<ul style="list-style-type: none">- Wrong adjustments to recipes (too much liquid, flour etc.)- Wrong size pan used. Mixture should fill 2/3 of pan.
Poor flavor	<ul style="list-style-type: none">- Improper mixing procedure.- Improper cleaning and greasing of the pans.- Faulty baking conditions.- Improper cleaning of the equipment.
Breads too tough	<ul style="list-style-type: none">- Excessive mixing.- Batter too stiff (insufficient water).- Batter too thin (excessive water).
Lacks body/structure	<ul style="list-style-type: none">- Excessive mixing- Insufficient liquid.
Dries out too soon	<ul style="list-style-type: none">- Excessive baking time.- Insufficient liquid.- Improper mixing procedures.- Cooled in a drafty location.