COURSE GUIDE

HCM 310
CURRENT ISSUES ON FOOD SAFETY AND SANITATION

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Introduction

HCM 310: Current issues in food safety and sanitation is a semester course work of two credit units. It will be available to all students, taking the B.Sc Programme in the School of Business and Human Resource Management.

This course of 10 units involves Food Service and Professionalism as an aspect of Hospitality degree programme. It is necessary for all hospitality organizations such as: hotel, restaurant, pub houses, coffee shop etc to alleviate management problems to maintain high standard of hygiene. It covers personal, equipment and environmental hygiene.

The course guide tells you what the course HCM 310 is all about the information you need to make a success of your business in your chosen career. Other information that contained in this course includes how to make use of your time and the information on the tutor marked assignment. There will be tutorial classes. Full details concerning the tutorial classes will be conveyed to you at the appropriate time.

What You will Learn in This Course

HCM 310 talks about current issues in food safety and sanitation. It is very necessary for you to bear it in mind that the course you are doing or that you've got yourself involved is a peculiar course that deals primarily with human beings and one of their life basic needs, that is food. Hence it requires a special and peculiar attention about safety and sanitation.

The course contents consist of the objectives, benefit and challenges facing the hospitality industry as regards the issues of food and sanitation safety. It analyses the various health hazards of poor sanitation in the food and beverage production and service areas, what precautions to take and the equipment used in order to promote good hygiene in the kitchen and food/beverage service areas.

Course Aims

The aim of this course is to familiarize you with the necessary primary and secondary things that are of necessity in current issues in food safety and sanitation.

It will also expose you to the Current issues in food and sanitation safety in the hospitality industry.

This course will help you to appreciate ‘Current issues in food safety and sanitation’. It is important to all the service industry at national and

international levels. As you will see in some of the units you will learn how to achieve the follows: personal hygiene of the food handlers, prevention of chemical food poison, highlights of food poison bacteria and how to handle equipment and other materials used in the industry.

Course Objectives

The objectives of this course are to expose you to the Current issues in food safety and sanitation in the hospitality industry. By the end of this course you should be able to:

- implement and render healthy catering services.
- acquire knowledge about health and safety for a new or refurbished catering premises
- gain enough knowledge of kitchen floor safety and hazard analysis.
- have sufficient knowledge about the importance of food hygiene, food safety, personal hygiene, equipment and standard Agency.
- understand all about control of waste and recyclable materials.
- to control of Waste and Recyclable Materials

Course Materials

- The Course Guide
- Study Units
- Textbooks
- The Assignment File

Study Units

Module 1

Unit 1	Implementing Healthy Catering Services
Unit 2	Health and Safety for New Catering Premises
Unit 3	Food Safety Temperature Control
Unit 4	Pest Control
Unit 5	Kitchen Floor Safety

Module 2

Unit 1	Food Safety
Unit 2	Importance of Hygiene
Unit 3	Food Hygiene (Amendments) Regulation 1990/91
Unit 4	Kitchen Hygiene
Unit 5	Control of Waste and Recyclable Materials

The first five units dealt with the need to implement healthy catering services and to maintain healthy and safe environment. Also the importance of eradicating pest in the food production and service areas was discussed. It finally explained how to prevent accident in the kitchen by maintaining safe floor.

The second module consists of the sixth to tenth units. It discusses the importance of hygiene which covers, hygiene in kitchen, environmental hygiene and personal hygiene of the food handlers. Control of waste and the advantages of recycling materials was also discussed.

Each study will take at least two hours and it includes the introduction, objectives, main content, exercise, conclusion, summary and references. Others are tutor marked questions.

You are expected to study the materials and do all exercises. Some of the exercises will necessitate your visiting some organizations such as: hotels, restaurants, fast food restaurants, pubs, coffee shops etc. You are advised to do so in order to observe and appreciate this course and find out what techniques are adopted by different organizations for successful operation.

There are also textbooks, under references and further readings. They will provide you with additional information. Practice the tutor-marked questions for additional practice and greater understanding. By so doing you will achieve the stated learning objectives.

Assignment File

There will be an assignment in each unit. The exercises are tailored to help you have a full understanding of the course. Practice these assignments carefully, it will help you assess the course critically consequently increasing your knowledge of the course.

Tutor-Marked Assignment

In doing the tutor-marked assignments, you should apply what you have learnt in the content of the study units.

These assignments are expected to be turned in to your tutor for grading. They constitute 30% of the total score.

Final Examination and Grading

At the end of the course, you will write an examination. It will attract the remaining 70%. This makes the total final score to be 100%.

Summary

HCM 310: This course, Current issues in food safety and sanitation' further shows you the challenges facing of the hospitality industry and how to prevent such problems. 'Prevention is better than cure'. It defines hygiene and analyses how to serve the guests in a clean and hygienic environment as well as the use bacterial free equipment. Finally, prevention of accident in order to make the environment safe for the users and recycling of wastes have also been discussed.

At the successful completion of this course, you would have learnt how to render bacteria- free service to your customs and prevent health hazards.

Good luck and thank you.

MODULE 1

UNIT 1 IMPLEMENTING HEALTHY CATERING SERVICES

CONTENTS

1.0 INTRODUCTION

You are welcome to this particular unit on Current issues in food safety and sanitation. This course consists of 10 units involving hygiene and safety at work and sanitation as it affects the hospitality organisations. The course covers service industry specially those in the profit secor.

This is to expose you to the various methods of preserving and preparing food in an hygienic environment.

It is the objective of Government policy to encourage catering establishments to offer a range of foods which enables people to make healthy eating choices.

The Department of Health has now published a scientific report on dietary reference value, which make detailed recommendations for changes to the average UK diet in order to promote good health and reduce ill health.

In essence, the recommended actions are the total energy (Calorie) level of the diet should be sufficient to maintain an ideal body weight. Total dietary fat should be reduced and, in particular, the intake of saturated fat, non-starch polysaccharides (fibre) intake should be increased; intake of salt and extrinsic sugars should be reduce. Extrinsic sugar include refined and unrefined brown and white sugars of all types glucose syrup, treacle, honey and unsweetened fruit juice.

2.0 OBJECTIVE

After reading through the unit, the students would have known all it entails in implementing healthy catering services and be able to apply this as stated.

3.0 MAIN CONTENT

3.1 Recopies and Ingredients

Check recipes and wherever possible, reduce fat, sugar and salt levels. Do not use substitute or salt alternatives in food preparation. Minimal use of salt in cooking is acceptable. Replace the more saturated fats (lard, suet, butter and pastry margarine) with unsaturated fats such as unsaturated block or soft margarines and white fats, oils such as repressed, sunflower, safflower, olive or nut oils.

Use a variety of fish – white or oily, the latter is thought to provide some protection against heart disease. Purchase the leanest possible cuts of meat. Remove skin from poultry before cooking if it to be casseroled, because this is where poultry fat occurs. Make use of reduce fat product wherever possible, particularly the dairy products such as semi or fully skimmed milk low fat yogurt less than 10% fat varieties of from age fats, Greek yogurt, Quark soft cheese and similar products. Use reduced fat cheeses, or small quantities of stronger flavored cheeses such as

Parmesan or very mature Cheddar. Reduce the number of roux or cream sauces used – look for alternative sauce methods which use less fat.

You can increase the fiber content of flour based dishes by including from 25% to 50% whole meal flour in all flour based recipes other than white sauces. Use pulses to chicken soups and casseroles. Use the minimum amount of sweeteners such as sugar (brown or white), honey, syrup, treacle. Serving more fruit-based desserts helps to reduce sugar levels. Use the minimum amount of salt, salty bouillons and packet soup mixes. The latter two contain high levels of salt. Use one layer of pastry rather than two. Use oatmeal coatings or added to crumbles and other suitable dishes.

3.1.2 Cooking Methods

Minimize the use of deep fat frying. If you do fry, always ensure the thermostat on the fryer is working and that the oil is at the correct temperature is clean and is kept covered when not in use. This will help to minimize the uptake of fat by the food stir frying uses less oil. Bake grill poach, roast or steam. When grilling ensure the food sir on a rack and not on a flat oven tray. Roast on racks or a mirepoix of vegetables. There is no need to brown meat in fat to seal it, just dry fry or add boiling stock. Use the leanest possible cuts of meat and trim any visible fat either prior to cooking (casseroles) or prior to service (roasts). Instead of always using piped cream to decorate desserts, decorate ½ - 1/2 of all cold desserts with fresh or dried fruits.

To retain as wide a range of vitamins and minerals as possible, it is preferable to cook vegetables under high-pressure steam with minimal subsequent warm holding.

Self Assessment Exercise

Mention 2 methods of cooking.

3.1.3 Food Service/Counter Presentations

Serve poultry with the skin removed. Offer alternatives next to each other, e.g. butter, unsaturated margarines and reduced fat spreads together. Offer vegetables without fat or cream sauces (which can be offered separately). Offer some reduced fat salad dressing at the side of salads served without dressing. On the salad counter offer fresh meats and fish as an alternative to tinned varieties and pastry items to help in the reduction of fat and salt. Offer lower fat alternatives to pouring cream for desserts i.e fro mage fairs, yogurt and similar reduced fat products. Offer a variety of breads and rolls, which include whole gram

varieties. Ensure sandwiches reflect this variety. Offer a selection of higher fiber biscuits and crisp bread. Offer a wide variety of interesting fresh fruits, vegetable and salads.

3.1.4 Special Points

Offer at least one lower fat/higher fiber/lower sugar or lower salt item on each section of your menu. There can be marketing advantages in this approach. Healthy eating is not assessed dish by dish. A healthy intake of food (diet) is assessed over a period of time. Achieving an appropriate intake of food, from a wide variety of foods, with the emphasis on starches (particularly fibre rich starches), fruits and vegetables along with less total fat is the individual aim. The provision of such items on your menus is help to individuals wishing to achieve a healthy diet.

Any nutritional claim should be within statutory requirements. U.K. Legislation has always made it an offence to give wrong or misleading information. The laws were drafted for the manufacture of foods, which have tight computer controlled ingredient levels. Caterers who do not weight recipe ingredients, nor weigh food onto the plates, will be making "misleading claims" which could lead to legal action being taken against them. Before embarking on major changes to recipes, ingredients purchased, cooking and serving methods, it is advisable to draw up a "plan of action" or "targets" to achieve. These should consider training needs, costs and a realistic time scale. When you feel it is appropriate to do so you should inform your customers of all the changes that you have made to achieve "healthy catering practice. This will show, without the need for nutrition labelling, that you have indeed produced healthier food choices.

3.2 Preventing Food Poisoning

Bacteria and other microorganisms in foods, or may cause food poisoning occasionally by chemical contaminants. Thus technical brief deals with bacteria which are everywhere in the environment. If present in food, certain types of bacteria may cause food poisoning. Food needs to be kept as free as possible of these types and their growth must be halted or slowed by could conditions. For most bacteria;

- No growth occur in the deep freezer at IB-C;
- Slow growth occurs in the refrigerator at $5^{O}C$
- Very rapid growth occurs at body temperature $37^{O}C$

Perishable foods must therefore be stored in the deep freezer at 18OC of in the refrigerator between O and $5^{O}C$ (The legal standard of 8Oc should be regarded as a maximum temperature). Viable bacteria are destroyed as pasteurization and cooking temperature e.g $70^{O}C$ and above, but bacterial spores may survive cooking and may then germinates and grow

if cooked food is cooled and stored incorrectly. If foods are contaminated with bacterial after cooking, food poisoning again becomes a possibility.

3.2.1 Good Food Handling Practice

Stock Control	-Date mark and apply 'use by' dates to incoming foods (if not already marked) -use stock in order of date marks, according to first in first out principle check 'use by' dates and discard food on expiry.
Storage	-Store food hygienically at the appropriate temperature (store room, ventilated cupboard, refrigerator or freezer). Keep covered to prevent contamination.
Refrigerators	-Always operate at below + 5OC; check temperatures regularly with an accurate thermometer. -arrange regular maintenance (not just when they break down). -Do not put hot food in a refrigerator, is a small one without a fan. -Store raw and cooked food in separate refrigerator is available raw food must not be situated above, or touching cooked food.
Thawing	-Frozen poultry and joints must be thoroughly thawed before cooking. Beware of 'drip' because it is a potent source of bacteria.
Cooking	-Cooking high risk meat products such as burgers, susages, pork or chicken to a center temperature of at least $70^{O}C$. -If other meats are to be served to people whose resistance to food poisoning is low (i.e the very old, very young or sick) they must be well cooked and not 'rare'. Likewise, eggs that are only lightly cooked (boiled, poached or fried) should not be served to these groups. -If 'high risk' foods such as meats, are to be microwave cooked, followed the manufacturers instructions carefully.
Cooling	-Cool foods as quickly as possible because bacteria can grow during the cooling period. - if a blast chiller is not available, allow hot food to cool for not more than 90 minutes in a cool place before refrigerating. - Small pieces can be cooled more efficiently than large pieces.
Reheating	-If cold food is to be reheated, all of it must reach at least $70^{O}C$ for a minimum of 2 minutes. Take particular care with microwave reheating
Warm holding	-Foods must be held at above $63^{O}C$ -If warm hold' food remain unnerved it must be discarded.
Leftover	- Refer to technical Brief No 9 ("What to do With unused Pre-Prepared Foods"). If in doubt-throw it out.
Cross-contamination	- Keep food covered wherever possible. - Use clean protective clothing, clean wiping loths preferably disposable and clean tea-towels and wash hands frequently

	especially before and after every job. - Do not touch. Use tongs, plates trays, etc.
Vermin	- Prevent contamination by rates, mice, cockroaches, birds, flies and other pests.

3.2.2 Staff

Training -Staff should be educated in basic hygiene, and given formal training (e.g. Institution of Environmental Health Officers Certificates for Food Handlers).

Personal Hygiene –All staff must wash their hands thoroughly especially

a) after visiting the toilet
b) after handling raw food (particularly meat, fish and poultry);
c) on entering the kitchen to prepare and handle food;
d) after handling refuse;
e) after coughing, sneezing or smoking –Wear clean overalls and head coverings

Staff fitness a) Staff suffering from stomach upsets, diarrhea or vomiting must report their illness immediately and must not be allowed to work with food.

b) cuts and abrasions must be covered with water proof dressings.

3.2.3 Building

Premises should be hygienically designed, in good repair and easily cleaned. There must be adequate services, with separated washing facilities for food equipment and hands. Adequate storage space must be available for chilled, frozen and other foods.

3.2.4 Beware

The commonest causes of food poisoning include:

- Food prepared too far in advance
- Storage at ambient temperature
- Inadequate cooling
- Inadequate reheating
- Contaminated processed food undercooking
- Inadequate chewing
- Cross-contamination
- Improper warm holding
- Infected food handler

3.3 Environmental Issues

Concern is increasing daily over environmental issues as they affect the natural world. These include global warming, acid rain, the depletion of the ozone layer, tropical rain forest destruction, desertification and the fire wood crisis, third world debt and poverty. Closer to home we are faced with increasing congestion on the roads, the loss of precious country side, its 'erosion' by tourists, problem over the quality of our food and so on. The list seems endless and simply serves to demonstrate the fact that every decision or action we take has an influence on the environment.

The purpose of this brief is to highlight long-term issues for consideration by every business in the Hospitality Industry. It has been written with assistance Clive Gordon of the Environment and Development Company and the HACIMA Environment Working Group.

3.3.1 Policy

Every business should have a policy statement, which, as a minimum, should make a commitment to:
The concept of sustainable development. This recognizes that business growth can be supported by good environmental practice.
Practical action to protect the environment.

3.3.2 Immediate Practical Action

Check your building's insulation. An investment that ensures high practical standards of insulation will also save money.
Introduce an effective energy management and monitoring system
Plan food production to minimize waste.
Avoid purchasing any products containing CFCs (for further information read HCIMA Technical Brief No 26, CFCs).
Consider purchasing products, which are produced from recycled material.

Purchase woods from properly managed and sustainable plantations. Avoid hardwood timbers from tropical rain forests. Consider where possible the use of wood substitute made from recycled materials.
Purchase toiletries and cleaning materials which are not harmful to the environment. Consult suppliers on the reduction of the packaging. Where possible reduce usage.
Introduce routine environmental audit procedures to existing and new developments.

3.3.3 Recycling

Whenever possible, re-use items but, if you cannot, then recycle glass, aluminum, plastic, textiles, metals and other materials. Contact your local authority to enquire about recycling schemes.

3.3.4 Waste Management

Take responsibility for ensuring all waste is disposed of in an environmentally acceptable way, particularly those items which cause pollution such as waste cooking oil.
Staff Involvement

A senior manager should be given responsibility for environmental issue.

Involve staff in all environmental activities
Inform and train staff effectively. With their full co-operation and understanding success will be easier to achieve.

3.3.5 Sustainable Use of Natural Resources

Some of the most significant decisions we make are those associated with purchasing products and materials of all kinds.
Do the raw materials come from a sustainable, ie renewable resource?
What is the supplier's production process?
Doest it generate pollution, create waste, use large amounts of energy?
Consider the impact of transporting goods to your premises.
Is the product being purchased capable of being maintained/cleaned without using environmentally damaging materials?
Does the product generate unacceptable wastes or pollution?
Is the product or material reusable recyclable or safely destroyed?

3.3.6 Planning New Developments

Assess the environment impact of new developments
Conduct landscape and ecological surveys with the aim of ensuring the most suitable site plan and creative design in harmony with the environment.
Design and construct the buildings to ensure they reflect local and regional identity taking into account the sustainable use of natural resources, the maximization of energy conservation and the minimization of waste during construction.

3.3.7 Marketing and Public Relation

Ensure promotion and publicity reflect environmental policy.
Support local environment initiatives and encourage staff to participate.

Self Assessment Exercise

Mention 2 immediate practical actions you will take to forestall environmental issues.

4.0 CONCLUSION

The importance of healthy catering services on never be overemphasized considering its immense contribution to healthy living and prevention of danger from unforeseen circumstances.

5.0 SUMMARY

This unit has discussed issues concerning implementation of healthy catering practices, how to prevent food poisoning, and environmental issues. It talked about cooking methods, food services, good food handling etc.

6.0 TUTOR-MARKED ASSIGNMENT

Highlight 3 points concerning good food handling.

7.0 REFERENCES/FURTHER READING

Catering for Health Stevenson & Scobie. Hutchinson, 1987 Catering for Health, The Recipe File-

Department of Health HMSO, 1988 Basis Cookery – The Process Approach- Stevenson Stanley Thrones 1991.

Eating for a Healthy Heart - Good Housekeeping Coronary Prevention Group.

Eighty Guideline for a Healthy Diet – Food Sense MAFF 1991.

Smart Cooking – Graiham Kerr. 1991.

Managing your Business in Harmony with the Environment – published by HCIMA, available from HCIMA information Office.

HACIMA Technical Brief No. 26, CFCs – available free of charge from HCIMA Information office.

Environmental Management for Hotels The Industry Guide to Best Practice – International Hotels Environment Initiative. Published by Butterwroth Heinemann.

Each Limited 50 Simple Things your Business can do to Save the Planet – published by Greenleaf, published in association with CAPPTB Plc.

UNIT 2 HEALTH AND SAFETY FOR NEW CATERING PREMISES

CONTENTS

1.0 INTRODUCTION

Health and safety issues in the catering industry have become a major part of the caterer's life, as legislation beings to bite. The accident rate in the catering would is very high and the risk to all users, staff and visitor's alike, of catering premises can lead to serious legal and personal consequences for owner/occupiers.

Unfortunately, not a great deal of publicly is given to this area and consequently, this brief is intended to be a layman's guide of what to do and where to obtain information, when planning top build or refurbish catering facility.

2.0 OBJECTIVE

After reading through this unit, the students would have had appreciable knowledge about health and safety for a new or refurbished catering premises.

3.0 MAIN CONTENT

3.1 Health and Safety For New Or Refurbished Catering Premises

3.1.1 Legislation

In 1994, changes to the health and safety at Work Act places the onus fairly and squarely on the developer, occupier or owner of catering premises to protect all people involved from risk of accident when using their facility.

However, when refurbishing, or building a catering facility, all sort to trades can b employed on the site, making health and safety regulations difficult to implement and control, prior to 1994 the legal responsibility for Health and safety management during the design and construction of premises was unclear.

This area of weakness in Health and safety legislation was addressed by the introduction of "CDM" regulations (Construction Design and management) in 1994.theobjective of these regulations is to minimize potential health and Safety risks and hazards, both during the construction of and subsequently the operation of all development, including catering.

The CDM regulations apply to any site where five or more people will be same time or any design or demolition work.

Therefore, all involved in refurbishing or rebuilding a catering facility are required to comply with these new regulations.

3.12 How Will The Regulations Affect You?

The CDM regulations place new duties on clients, planning, supervisors, designers and contractors to plan, co-ordinate and manage health and Safety through all stages of work.

Anyone who appoints a designer or contractor has to ensure that they are competent and will allocate enough resources to comply with health and safety legislation.

The Client:	should take ultimate responsibility for the appointment of a competent designer/contractor
The designer:	Should ensure that all possible measures are taken to provide Health and Safety guidance
The Planning Supervisor:	Should have overall responsibility for developing the Health and safety guidance
The contractors:	Should have responsibility for implementing the Health and Safety Plan.

3.2 The Fire Precautions (Workplace) Regulations 1997 Introduction

The purpose of this brief is to provide a management summary of the new fire precautions regulations. The new regulations stem from two EC Directive known as framework and workplace Directions respectively.

The two Directives introduced measures intended to ensure minimum standards of health and safety at work and were brought into UK national legislation through the management of health and Safety at work Regulations 1992 and the Workplace (Health, Safety and Welfare) Regulations 1992, which come into force in January 1993.

The fire precautions (workplace) Regulations 1997, which came into force on 1 December 1997 in the UR complete the implementation process.

3.2.1 The Fire Precautions (Workplace) Regulations 1997

These regulations apply to all workplaces except those used only by the self-employed, certain other premises have been exempted, but these are covered by existing and the premises include not all of the building, but the cartilage (adjacent outside areas) as well, provided it is private ownership.

3.2.2 Fire Precautions

Where it is necessary to ensure adequate means of escape and in order to ensure the safety of employees in case of fire, then consideration should b given to fitting:

- Firefighting equipment
- Fire detectors and alarms
- Signs and notices and
- Emergency lighting.

3.2.3 Risk Assessment

The management of Health and Safety at Word: regulations 1992 have been amended to take account of these new regulations now require a risk assessment to be carried out in all premises to which the new regulations apply. A written risk assessment is required where more than five persons are employed.

It is the direct responsibility of the employer to carry out the risk assessment and identify people at risk.

Details of what is required for the assessment are given in the Guide to fire precautions in the workplace, reference below.

3.2.4 Enforcement

It is the responsibility of the local fire authority, through the fire serviced to enforce the regulations.

3.2.5 Inspections

Fire service inspections will be carried out when needs arise, e.g building regulations, planning and licensing applications e.t.c

The fire service will wish to see and assess risk assessment prior to carrying out an inspection. If a written or oral risk assessment cannot be produced, normally the inspection will not proceed. The Regulations will be explained and a date for a follow up inspection will be arranged by which time the risk assessment should have been completed.

Self Assessment Exercise

Mention 3 methods of fire precautions.

3.2.6 Method of Enforcement

Depending on the level of risk enforcement can be taken either through the civil or criminal courts, according to the seriousness of the offences. Enforcement action can be broken down as follows:

- Low Risk- Notice of Intent-Enforcement order

- Serious Risk (but not urgent)-Enforcement Notice
- Imminent Danger –section 10 prohibition Notice

Contravention's which can normally be remedied during the inspection may be dealt with orally, but must be put in writing if so requested.
Where a contravention has occurred, normally a notice or letter of intent would be sent.

3.2.7 Policy

This is a new era in fire safety. The regulations are based on self-assessment and minimum levels of requirement. The fire service will no longer rely on best practice or prescribed rules but will apply professional judgment in the circumstances of the case.

Premises which are issued with Means of Escape Certificates under the Factories Act 1961 or the other Shops and Railway premises Act 1963 are not exempt from the Regulations. Where premises conform to the code of practice for premises not required of have a fire certificate, this will normally be acceptable.

If the premises do not meet the standards of the above code of practice then, on a risk assessment basis, the fire service will decide whether additional measures are required.
A full reference to the Code is given below:

If a problem area based on the existing Code of practice is identified, fire service offices will apply professional judgment to the risk assessment and will decide what is necessary to solve the problem. Others may deviate from codes but must be able to justify their decisions in terms of achieving a minimum but acceptable level of safety.

Although measures are designed to protect employees, the risk assessment must also take into account the risks to other people using the premises.

3.3 Health and Safety at Work: Risk Management Introduction

Risk management is the generic term used to describe the due diligence process of identifying risks associated with day-to-day operational procedures.

In practice this probably carried out informally by most managers everyday. But formalizing the practice of risk management it is possible

to reduce the operational cost of the business by reducing the risks which could incur misfortune or loss.

Service industries depend for their profitability on people using facilities and services and any perception that premises or practices are unsafe can cause permanent harm to the reputation of that business.

Risk management should be applied to every aspect of health and safety within a business to ensure that priority given to the elements that will, in any manner, either harm the business or the individual.

3.3.1 What is Risk Management?

Risk management is a pro-active approach which:

- Carefully examines the various activities of an organization
- Identifies the risks for potential frequency and severity
- Eliminates those risks which can be eliminated
- Reduces the effect of those that cannot b eliminated
- Puts into place financial mechanisms to absorb the financial consequences of the risks that remain.

3.3.2 Key Aims of Risk Management

- Safer systems of word
- Safer premises
- Greater staff awareness of danger and liability
- Reduction of potential financial losses.

As will all quality management systems the aims is to conduct business to the best possible standard with the highest possible quality of customer care. The by-product of this is a reduction in costs associated with risk taking

3.3.3 Where do Risks Occur?

Risks occur in any element of an organization. The key elements are:

- The building
- The equipment
- The people
- The systems used
- The management structures
- Supply sources

All of these elements have a critical influence on the management's ability to control risk. Risk management is concerned with compiling

information about the risk elements of the business which are often already known by the organization or are within its level of expertise. The management system brings to either the knowledge or the expertise to provide an estimate of the likelihood of an incident happing.

Self Assessment Exercise

3 key aim of risk management

Risk Assessment

In the Hospitality industry the major part of risk management is the Risk Assessment. This is a careful examination of what, in the business, could case harm o people. This allows identification of what needs to be done. It can be formalized in an organization by using a standard document.

The person carrying out the assessment must have a thorough knowledge of the business, including its Health and safety Policy, business procedures and overall method of operation.

The assessor does not have to be a member of the organization provided that business operations are well enough documented to give sufficient information.

It is very important that interviewing and listening as well as observation and measurement forms part of the assessment. The elements of the assessment should be small enough to be manageable but big enough to identity the beginning and end.

For example running kitchen is a large element of a hotel operation but in assessment terms it may b split into a number of parts, which should be assessed separately.

It is important to have preliminary discussions with those who work in the area to identify the scope of each assessment.

All assessment should use the same criteria and scoring system. Making the risk assessment is time consuming but the risk or not doing it could mean the failure of the business.

Risk Identification

The assessor must ask questions

- What could go wrong?
- How could it happen?

- What would be the effect on the business and any individuals?

What should be done to remove, minimize and mange the risk?

Risk can arise form a single factor or a series of small factors, which can combine to cause loss or injury. As an example the washing of steps can be more or less risky depending on the time that the steps are washed and the pedestrian traffic flows around the area.

Some risk is inherent in the operations of a business. The object or risk assessment and analysis is to determine how often the risk is likely to happen, what will be the financial effect on the organization and how can the effect be minimized.

Legal Requirement

The management of health and Safety at Work Regulations 1992 and their Approved Code of practice require this assessment to be undertaken and where more live persons are employed the "significant".

4.0 CONCLUSION

Legislation and enforcement of Legislation are vital to health and safety for a new or refurbished catering premises.

5.0 SUMMARY

This unit has considered among other things, health and safety for new catering premises. Fire, precautions, and health and safety at work places.

6.0 TUTOR-MARKED ASSIGNMENT

Question: Highlight 5 methods of risk management.

7.0 REFERENCES/FURTHER READINGS

The fire precautions (Workplace) Regulations 1997. The Stationary Office, ISBN 0-11- 06.1738-6. Guide to fire precautions in the Workplace. The Stationery Office, ISBN 0-11-34169-3.

Fire risk management in the Workplace (A guide for Employers) fire protection Association ISBN 0902167, 73-1 fire protection magazine (monthly) Tel: 0181 207 2345.

UNIT 3 FOOD SAFETY TEMPERATURE CONTROL

CONTENTS

1.0 INTRODUCTION

Inadequate food temperature control is one of the most common causes of food borne illness and food spoilage. Controls include time and temperature of cooking processing and storage. Systems should be in place to ensure that temperature is controlled effectively where it is critical to the safety and suitability of the food.

Depending on the nature of he food operations undertaken, adequate facilities should be available for heating, cooking, cooking refrigerating and freezing food, for storing refrigerated or frozen foods, monitoring foods, monitoring food temperatures and when necessary controlling ambient temperature to ensure the safety and suitability of food.

Equipment used to cook, heat treat cool, store or freeze food should be designed to achieve the required temperature as rapidly as necessary in the interests of food safety and suitability and maintain them effectively. Equipment should also be designed to allow temperature to be monitored and controlled.

The Food Safety (Temperature Control) Regulation 1995

These provisions replace the previous two-tier chill temperature control system in England and Wales with a single control temperature 8OC. They also replace the prescribed list of foods requiring temperature control in previous. Regulations with a more general requirement covering any food likely to support the growth of harmful bacteria. The regulations also allow some flexibility consistent with Food Safety to take into account practical handling issues.

2.0 OBJECTIVE

After reading thoroughly through this unit, the students would have understood all about food safety and control, and all about Packaging and the environment.

3.0 MAIN CONTENT

3.1 Who is Affected?

The Regulations apply to all types of catering and retail food businesses, whether the food is a sold publicly or privately for product of for fund raising. The Regulations do not apply to food cooked at home for private consumption.

3.1.2 The Basic Temperature Requirement

The Regulations state that foods which need temperature control for safety must be held either:
Hot : at a temperature at or above a minimum temperature of $63^{O}C$
Chilled: - at or below a maximum temperature of $8^{O}C$.

3.1.3 Food which need Temperature Control

Whilst Regulations do not list specific foods they are likely to fall into a number of categories.

a. Dairy product such as soft or semi-hard cheeses, diary based desserts or products containing whipped cream.
b. Cooked products such as food containing eggs, meat fish milk, cereals, pulses and vegetables.
c. Smoked or cured ready-to-eat meat or fish –unless the curing method leaves the product shell stable at ambient temperatures
d. Uncooked protein foods such as meat fish and eggs.

e. Prepared ready to eat foods such as prepared vegetables. Vegetables salads or prepared products containing mayonnaise
f. Uncooked or partly cooked pastry and dough products.

Self Assessment Exercise

Mention the basic temperature requirement for Hot and chilled foods.

Whenever a new build or refurbishment facility is worked upon the CDM regulations apply and unfortunately design cost will increase costs will increase to cover the additional cost of planning supervision, responsible for Health & Safety throughout construction.

Particularly care needs to be taken when a unit continues to operate while building is taking place.

All interested parties in the Design and Construction chain must taken active part in developing and managing the CDM regulations and work as a term to ensure implications.
A successfully completed CDM programmer should ensure that Health and safety issues are addressed during construction and not left to operate employees to find out the problem afterwards.

3.1.5 Once Operational

The development of a Health and Safety policy with guidelines and training for employees is essential. Training can be given commensurate with the employees takes but all employees should have sight of the Health and Safety policy document with a brief synopsis giving instruction on low to avoid risks, what they are likely to be and the reporting procedure in case of accident.

The regulations to protect employees and the public are now numerous and anyone involved in the catering industry, whether already working in a catering operation or intending to build or refurbish should take steps to know the law and its implications.

3.2 Packaging and the Environment
Introduction

Throughout the 20th century the amount of packaging on the goods that we buy has increased significantly. Some packaging plays an essential role, protecting goods in transit sealing food stuffs and medicines from potential outside contamination, and providing a means of easy identification for many products, however packaging has become a

specific advertisement and brand association feature which serves little practical use. All forms of packaging do have an impact on the environment and many can be avoided, modified, or reused. The aim of this brief is to provide advise to help hospitality companies to reduce the packaging implications of their operations.

3.2.1 Why Packaging is an Environmental Issue

The environmental issues associated with packaging are:

Resource used in the manufacturing process. Plastic for example, use petrochemicals and cardboard uses energy intensive process.
Use of landfill to dispose of packaging such landfill is becoming increasingly scare in many developed countries
Creation of litter from improper packaging disposal.

3.2.2 The Benefit of Reducing Packaging

There are many benefits associated with reducing packaging, including:
Reduction in waste disposal costs. Some companies have reduced their wastes disposal costs significantly as a result of initiative reducing packaging.
Reduction in potential fire risk from stored package material.
Reduced risk of prosecution under regulations such as the Environmental Protection Act.
Potential income generation from selling packaging materials on for a secondary use by another company (some hospitality outlets for example have sold unwanted wine bottles, coffee been bags, and plastic pallets for use by other companies).
Reduction in the cost of products. Companies are charged for unnecessary packaging twice –once fro inclusion of the packaging on the product and the second time for its disposal. Avoidance of some types of packaging therefore, brings a dual benefits.

3.2.3 Legislation

Packaging and packaging wastes are mainly covered under existing waste disposal regulations. A recent EU directive has specifically addressed packaging and this directive will be implemented through national regulations in EU member states. In the UK it will be implemented through an amendment to the Environmental Protection Act. This will stipulate that industry must recover 58% of packaging waste by the year 2,000 Public authorities must recover the same percentage of packaging materials from both their own operations and household waste. Failure to meet this target is likely to be penalized through fines and increased waste disposal costs.

Poor disposal of packaging waste is covered through regulations dealing with litter also included under the scope of environmental regulations.

3.2.4 Changing the Packaging Implication of your Operation

Hospitality businesses of all sizes can introduce simple programmers to reduce the quantity of packaging waste that produced and many find that they save money by implementing such programmes. It is usually much easier for larger companies to reduce the packaging at the products that they buy because the bulk in which they purchase gives them more power with suppliers. Section 6 at the end of this paper provides ideas about how to influence existing suppliers, or select those who already have environmental policies.

When seeking to reduce the packaging implications of the operation, it is always best to start by looking at areas from which packaging can be eliminated because this brings the greatest cost and environmental savings. Once avoidable packaging has bee eliminated, other options to consider include reusing and recycling packaging.
Reducing or eliminating Packaging

Many products do not need packaging to protect them in transit or from contamination. It is possible to select alternatives for these products which have lower packaging implications or reduce packaging by working with suppliers. A checklist to identify all of the products used by the company which are necessarily packaged can be developed or one may want to focus on a few items which the commonly “over-packed”. These include:
Cleaning materials, such as furniture polishes, window cleaning fluids, and room sprays. Often packaged in individual dispensing containers, and then shrink wrapped onto cardboard palettes, these products can be delivered: as stand alone container with no additional packaging without the shrink wrap; or in large containers from which individual dispensers can be refilled and used numerous times (care should be taken, however, to ensure that bleaches and other potentially hazardous cleaning materials are purchased and stored in appropriate containers.
Room size portions of sop shampoo etc which are often individually wrapped in plastic, placed in individual boxes, and then delivered for transit in larger boxes. The plastic scrapping and individual boxes for such products are unnecessary. Some hospitality companies have significantly reduced the packaging implications of these products by replacing them with enviable dispenser (filled from large containers) containing higher quality products.

Linen, such as sheets, table cloths, napkins which are often individually packaged in plastic and then placed in boxes. The individual wrapping on these items can be dispensed with.
Catering items especially individual servings of for example ham and mil. The heavy use of packaging by these4 products can be avoided by the introducing of refillable containers which are placed on tables. Care should be taken when introducing such containers to ensure that there are no contamination or healthy and safety infringement issues to address.

3.2.5 The General Requirement

The Regulation contain a general requirement prohibiting the keeping of any raw materials ingredients, intermediate products and hindered products likely to support the growth of harmful criteria or the formation of toxins it temperature which would result in risk to health. In most circumstances maintaining food temperature at 8OC or at 63Oc or above will satisfy this requirement.

However there may be situations where it is appropriate to keep foods at chill temperatures lower than 8Oc soon as certain cook chill foods or souse-vide products.

3.2.6 Foods which are Exemption from Temperature Control

In specific circumstance some types of food are exempt from temperature control. These include:

a. Foods which can be kept at ambient temperature throughout their shelf life e.g some cured or smoke products or certain bakery products which are to be sold quickly.
b. Canned, dehydrated or other preserved foods.
c. Food, which must be ripened or matured at ambient temperature. Once fully repined or matured the food must be stored ambient displayed at or below $8^{O}C$.
d. Raw food intended for further processing (including cooking) which will ensure the foods is fit for human consumption.
e. Mail order food-although exempt from the $8^{O}C$ control mail order foods must be supplied at temperature, which will not present a healthy risk.

3.2.7 Service or Display

Food to be served cold and which would normally require holding at $8^{O}C$ or below may be displayed above. $8^{O}C$ for maximum period of hours. Only one tolerance period of service or display is allowed. After

this remaining foodstuffs should be either replaced under chill control until final use, or discarded.

3.2.8 Handling and Unloading

Consistent with food safety, periods outside chill control are allowed where:
Food is being loaded or unloaded from a refrigerated vehicle
There are unavoidable circumstance e.g when food has to be handled during and after processing or if equipment temporarily breakdown.

Self Assessment Exercise

Mention 2 benefits of reducing Packaging

4.0 CONCLUSION

This unit has highlighted in great details, the relationship between food safety and temperature control**.**

5.0 SUMMARY

In this unit, we have discussed exhaustively about food safety and temperature control as well as packaging and the environment.

6.0 TUTOR-MARKED ASSIGNMENT

Mention 4 kinds of foods which are exempt from temperature control.

7.0 REFERENCES/FURTHER READINGS

Managing Construction for Health & Safety “Construction (Design & Management) Regulation 1994
“A Guide to Management Health & Safety in Construction”

CDM Regulations: How the Regulations affect you HSE Books, P.O. Box 1999, Sudbury, Suffolk, CO106FS.

The Food Safety (General Food Hygiene) Regulations 1995 Ref S1 1763 Industry Guide to Food Hygiene Practice: Catering Guide ISBN 011-321899-0 HMSO Publication Centre.

A guide to the General Temperature Control Regulations DOH P. O. Box 410, Wet herby.

Food Service Booklet: Keeping Food Cool and Safe MAFF Food Sense.

UNIT 4 PEST CONTROL

CONTENTS

1.0 INTRODUCTION

This brief outlines good practice in the maintenance of catering premises to deter pest infestation and gives guidance on what to do it infestation occurs. Infestation only occurs when favorable conditions exist. Pests can arrive from neighboring premises, on produce, equipment or luggage.

2.0 OBJECTIVES

After reading through this unit the students is expected to understand what it entailed to control pest and how to keep them out completely.

3.0 MAIN CONTENT

3.1 Pest Control

3.1.1 Some of the More Common Pests Which Infest Food Premises

Rats - found mainly in cellars, yards or other outside areas. They are particularly associated with areas open water, rivers and canal banks, and in urban areas, with sewers.

Mice - Found anywhere in the building-usually, close to food and moving round building, through wall cavil service during etc.
Cockroaches Never found singly, they thrive where it is dark, humid and very warm.

Stored product posts	Almost every product has its own dedicated pest-flour moths, bacon beetles, grain we evils, biscuit breather etc
Insects	Flies, ants, silverfish

To Deter Pests

- Prevent them getting into premises in the first place by the careful design of potential entry points (see Technical Brief No 4)
- Ensure that all goods inwards are checked on receipt. For instance mice can be brought into premises in crates of eggs, bags of potatoes. Secondhand equipment often arrive complete with families of mice or thriving colonies of cockroaches housed, the packaging or in the equipment.
- Eliminate all possible shelters-for instance, voids above ceiling, false bottoms to cupboards, gaps equipment, damaged or poorly grouted ceramic tiles.
- Ensure that pests do not have access to a food supply at any time.

In particular:

- Make sure that all floors, walls, surfaces and equipment can be cleaned and access is available to remove any accumulations of food
- Make sure that all cleansing processes are fully and properly completed
- Devise, maintain and regularly review cleaning schedules (which will prevent the build up of food residues) and dirty conditions
- Make sure that waste bins are of sufficient capacity emptied regularly and lidded at al times. Subjects to local advice, waste disposal units are useful, thus reducing any waste food storage but they use a lot of water.
- Make sure that all food is stored so that pests are denied access, (ie above ground level, on racks etc) and practice stock rotation
- Adopts a preventable pest control programme.

3.1.2 If Infestation is found in General

Even in the most carefully managed premises infections can occur. Evidence of infestation include:

1) Sighting of insects or rodents
2) Finding of droppings

3) Evidence of gnawed bags, sacks, wrapper and wiring

In Particular

In most cases, if pests are found, what is seen will represent only a small part of the infestation. Before attempting to deal with any infestation caterers should be aware that:-

It will not go away cannot be ignored-it will only get worse: remembers;

- Infestation can damage the reputation of the business, and frequently, legislation requires immediate action;
- Will cause product damage and loss as well as food contamination and possible illness,
- HACCP processes used properly may identify areas of risk of infestation;
- COSHH regulation apply as there is risk from the of use of pesticides as well as from the pests themselves;

Self Assessment Exercise

Mention 3 evidences of infestation

- Other catering items which are often "over- packaged includes vegetable and fruit deliveries and canned foods. Returnable crates are often sufficient packaging for such produce.

Reusing packaging

Many types of essential packaging are using only once and then sent to land till. Most packaging can, however, be reused by the original supplier and many supplies will now take away reusable packaging from previous deliveries as hey deliver new supplies (this requires sufficient space to store packaging safety between supply deliveries)
Types of packaging which can usually be returned to the supplier includes:

- Crates in which vegetables, drinks and bakery products are delivered
- Drinks bottles
- Sturdy cardboard boxes
- Wood plastic palettes/trays

Packaging can also be reused within a company fro a secondary purpose (after appropriate sterilization if necessary). Types of packaging which can be reused within the company include:

- Plastic bags/wrapping

- Boxes
- Plastic drinks bottles (after appropriate cleaning/sterilization)
- Plastic containers (after appropriate cleaning/sterilization
- Netting or hemp sacks.

Other types of packaging can be sold on to other companies. Packaging which has successfully been sold on includes:

- Sacking and netting (used by garden centers as mulch and to prevent bird damage to produce)
- Wine bottles which have been sold to companies specializing in home brewing processes corks
- Wooden palettes

Selecting packaging made from biodegradable or recycled recyclable materials.

Where packaging is necessary. It is usually environmentally preferable to select that made from recycled. Biodegradable materials are an alternative options but biodegradlility might be a very long process. This can usually only be achieved by talking to the supplier and encouraging them to select such materials. Care should be taken with some foodstuff which cannot be packaged in recycled materials because of the contamination risk.

Environmentally, it is particularly desirable for the following types of packaging to be made from recycled materials

- Aluminum containers
- Cardboard boxes
- Paper bags
- Glass bottles

Some packaging material can be recycled. Some recycling companies will pay to the take away good quality packaging waste representing a considerable cost saving. Local authorities also often have recycling facilities available at no or low cost. Types of packaging material which can be recycled includes:

- Good quality cardboard
- Aluminum/cans containers
- Glass bottles
- PET plastic bottles

Biodegradable packaging can be selected where recycled or recycling is not possible. The technology for developing; sufficiently strong and durable packaging from bloderagradable materials is, however. In its infancy and few reliable products are available. The following may, however be possible.

Replacing polystyrene chips with popcorn

Using paper and newspaper in place of plastic packaging (this is not suitable for foodstuffs as it infringes hygiene recommendations)

Disposal of packaging

Inevitably some packaging will end up in the waste stream and to avoid danger of prosecution and ensure that the area around the property remains attractive this should be disposed of properly. Disposal options include:

Land till (ensuring that potentially hazardous packing such as paint cans is separated from benign materials) incinerations (some local authorities now use their incinerators to generate energy).

3.1. 3 Tips for Working with Suppliers

Hospitality companies cannot reduce the packaging implication of their processes alone, but must work closely with suppliers to find out suppliers approach to environment issues, ask whether they have an environment policy statement if they do ask to receive a copy. If they don't but are interested in developing one, refer them to INCPEN (Industry Council for packaging and the Environment, Tendered I Tendered St, London. WIR 9AH tel: 0171 409 0949) which will help them to develop such a policy. If your supplier is willing to help reduce the packaging implications of the operations start by looking at products from which packaging can be eliminated and which will save both the company and the supplier time and money the green grocer, for example, could be asked deliver fruit and vegetables without the polythene or paper wrapping.
Also ask suppliers whether they:

- Are willing to collect packaging when making new delivers and work out a proper rote to ensure this does not generate too great an additional work load
- Use recycled content materials
- Have an agreement with any contractor to recycle materials or can help to locate contractors who do (a local authority should also be able to help in this task)
- Are willing to eliminate the plastic wrapping from certain processes

Larges companies who buy products in bulk have considerate scope to influence the practices of their suppliers smaller companies will be more limited in the range of action they can take. Smaller businesses in an area, can work with each other to buy in larger quantities improve the likelihood of influencing their suppliers.

If suppliers are unwilling to help reduce packaging, alternative sources products should be sought and a local of copy of the local authority may help to identify appropriate alternatives.

3.2 Keeping Pest Out by Design

Introduction

Pest can create risks to health structural and other damage, and even fire risk

The level of risk in the catering and hotel business is clearly high and needs to be considerate at the design stage. Pests are a major factor in thousands of food complaints reported to Environmental health department each year and feature in many prosecutions.

The most significant pests are mice, flying insects, cockroaches, rats, feral cats and pigeons, which may live and breed in premises where there is shelter, food water and an ideal warm environment. Garden ants frequently inhabit catering premises and, whilst giving no significant public health problems, are pests and need control.

Measures are necessary to make access difficult or impossible to reduce harborage sites in buildings and to ensure that potential food supplies are eliminated by means of good storage practices and general cleanliness.

3.2.1 Legal Requirements

Food safety (general food Hygiene) regulations 1995 require that food shall not be exposed to risk of contamination and that food rooms shall be kept in good repair and condition to prevent the risk of pest infestation.

The food safety Act 1990 makes it an offence to sell food which is unfit or contains foreign safety bodies furthermore found premises with serious infestations could be subject to a closure order under section 12 of the food safety act 1990.

Other relevant legislation includes. The prevention of damage by pest act 1949 and the health and safety at Work Art 1974

3.2.2 Specific Design Requirement

The following recommendations will help to prevent post access into buildings, and restrict the movement of pests from one part of a building to another.

All the recommendations apply to new buildings. Some apply to refurbishments.

Foundation:

Normal foundations will invariably prevent rodents burrowing beneath and into a building.
Oversight concrete ad solid ground floors:
Oversize concrete and solid ground floors should be laid so as to completely the area within the containing walls, thus eliminating any harbourage for small pests. Where service ducting is provided it should be adequately sealed to prevent access and harbourage. After construction is completed it is advisable to check bait for pests and, as an added precaution to prevent infestation, routine pest control maintenance should be adopted.

External Walls:

External and other cavity walls should be built so that there are no holes externally or internally bigger than 5mm larges holes will allow mice through. Airbricks should have holes no larger than this unless protected with wire mesh. The National House building council recommends that all bricks should be cased through cavities to help to deny harbourage in the cavity.

The employment of cavity closures will deny access between the cavity and the roof

Care should be taken ensure that adequate ventilation is provided see technical brief no. 30 kitchen ventilation.

Windows:

Windows if open for ventilation should be fitted with mesh prevent flying insect entry. This is particularly important on lower floors

Doors

Doors should close on to a level threshold so that there is an insufficient gap to allow access. Letter plates should be at least 760mm above ground level to comply with BS2911 and outward opening to exclude rodents. risk of rodent entry may be reduced by fitting self closing device on internal doors.

Roofs

Roofs should be designed and constructed specifically to exclude birds which can introduce secondary pests and our nuisance and contamination. Gaps should be kept below 12mm to exclude pigeons and sparrows. Fridge and hip titles in pitched roofs and those at gable ends should be bedded in mortar.

External Ledges:

External ledges should be reduced to help prevent roosting and nesting and subsequent fouling and nuisance. if practicable, ledges should be sloped at 45 degrees from the horizontal.

Internal Walls, Partitions and Ceilings:

Internal partitioning and ceiling cavities should be sealed to deny access to what can be excellent harbourage. to and inspection and treatment, access panels should be incorporated wherever possible. Hollows should be avoided at all costs, e.g behind skirting boards, architraves, moldings, covering etc. Coving of wall ceiling and floor junctions assists as regards cleaning thus helping to remove a potential food supply.

Fittings:

Pipes duct and trucking should be tightly built-in wherever passage through walls, floors, ceiling and foundation to necessary. Proofing should be completed as a appropriate suitable sealing. Pipe lagging of heated pipe work should be correctly installed and effectively sealed to prevent risk of cockroach harbourage. Drain pipes can permit rats to enter buildings unless hack inlet gullies are employed or soil vent pipe tops are covered with a wire balloon guard. Water tanks should be covered with close fitting vermin and bird proof lids: Lift well requires cleaning access doors to permit regular maintenance. Door or hatches provided for this access must be close fitting to prevent rodent entry.

Services:

Adequate waste storage arrangement, which should be well-ventilated and fly and rodent proofed need to be considered at design stages. Where wet waste is to be stored the floors should be designed so that they are capable of cleaned and laid wish suitable fall to properly trapped drainage systems. These should be suitable to the needs of the unit and the installation of both waste disposal units and compactors considered.

Equipments:

The cleaner the kitchen, the less there is of infestation developing. The sitting and design of equipment should therefore allow for ease of cleaning all around and prevention of accumulated dirt food scraps in nooks, canners, cavities and ledges catering equipment which is mounted on lockable wheels certainly aids cleaning maintenance. Solid construction of equipment without hollows or cavities removes potential sites for insect habitation.
Electric flying insect killers: such devices are last resort. It is estimated that they only deal with one in five house-flies. However they are preferred to aerosol fly sprays and vapour strips and are recommended as a safeguard. Appliance will only function efficiently when strategically sited away from main light sources. They will attract not only flies but wasps and moths, both of which are considered understandable in a kitchen ideally they should be sited as near to a door or window as possible

3.2.3 Pest Control

Appropriate measures should be taken against pests which may be bought in with purchased goods or imported by guests for example cockroaches in beer crates or on luggage, filed mice crated vegetable; pharaohs ants in clean laundry baskets

It is important therefore whenever possible to inspect incoming goods. It is advisable to remove external packaging outside product and storage areas.

It is recommended to have regular pest control inspections and treatments to prevent pest getting established premises

Self Assessment Exercise

Mention one specific design requirement for pest control

4.0 CONCLUSION

Control of pest is of paramount importance to a health food environment and freedom from food poisoning

5.0 SUMMARY

This unit has discussed all that is necessary as a precaution to rid our kitchen of pests and keep safe from food poisoning

6.0 TUTOR-MARKED ASSIGNMENT

Mention and specific design requirement for pest control

7.0 REFERENCE/FURTHER READINGS

Hygiene for Management R Spreniger, Highfield Publication 1993

Essential Food Hygiene RJ Donaldson, Royal Society of Health, 1993

Guidelines to Compliance with the Foods Safety (General Food Hygiene) Regulations, HMSO

UNIT 5 KITCHEN FLOOR SAFETY

CONTENTS

1.0 INTRODUCTION

In the catering industry injuries from slip and trips are six times the average rate for the manufacturing industry and on the main cause of 75% of all reported serious injuries and 35% of all injuries. Initiatives have shown that up to 66% of such accidents can be avoided through positive management.

2.0 OBJECTIVE

After reading through this unit the student would have gained enough knowledge of kitchen floor safety and Hazard analysis.

3.0 MAIN CONTENT

3.1 Kitchen Floor Safety

3.1.1 Safety Versus Food Safety

Successful initiative must balance the health and safety requirement floor with the food safety demands relating health ability. Floor safety is generally addressed by surface roughness to inhibit slipping, but many caterers worry that this may contact with food safety requirement.

However, research shows that rough surfaces can still be cleaned to the same level as smooth surfaces, although this may require more effort to the cleaning process and special cleaning equipment. But as long as the floor is impermeable, surface roughness can still be acceptable hygienically.

3.1.2 New Flooring

Examine closely the manufacturer specification for the safety of any floor surface and where practicable check the fact e.g references from previous clients.

If new flooring is identified as necessary then set a clear specification including slip resistance for the supplier meet. Suppliers will have access to research information and experience of the proposed floor in similar operating conditions to best advise purchasers.

3.1.3 Practical Measures for controlling Slips and Trips

Eliminate or limit floor contamination- prevent or contain leakage or drainage; provide good ventilation to reduce steam/grease deposits; attend to spills immediately; use suitable cleaning agents if spills are grease ensure cleaned areas are left dry or signposted if wet.

Maximize surface roughness and slip resistance of existing flooring – follow an effective cleaning regime as recommended by the floor supplier; suitably train and equip cleaning personnel to ensure cleaning procedures are effective and safe.

Increase the surface roughness of the exiting floor make use of cleanable matting floor treatment and banding my increase slip resistance.

Providellay a more slip resistance floor with better slip resistance this might subsequently require enhanced cleaning effort and special equipment consider limiting the improved floor surface to certain parts i.e walkways.

Eliminate uneven surfaces or slopes highlight changes in levels, make slopes gradual and step clearly visible avoid open gullies and channels.

Provide good illumination – ensure floor conditions and obstructions can be readily seen.

Select suitable shoes – micro cellular, urethane and rubber soles are the least slippery on wet floors; shoes soles should be maintained in good repair and free from contamination ensure that the shoe or soles.

Train, and supervise employees to clean as they go; report contamination including sources such as leaks; maintain footwear to walk appropriate to circumstances.

Signage – a hazard warming should be used to indicate cleaning in progress or wet/slippery floors.

3.2 Hazard Analysis and Critical Control Points (HACCP) – An Effective Approach to Food Hygiene and Safety

Introduction
The provision of safe food to the customer is a management responsibility in order to ensure that food is safe it is good package to establish a system to control food safety.

Food poisoning attracts public concern and constitutes a major threat to the caterer whose career or business could fail as a result of just of serious incident.

Food poisoning usually occurs because of poor practices and procedures. Therefore the caterer should examine their practices and operating procedure and ensure that adequate attention is given to the management of food safety within the unit.

HACCP or at least a HACCP based approach is the management technique that may be useful to caterers to ensure the process the use controlled.

HACCP is a system which provides for the identification and assessment or hazard and risks associated with all stages of food operation and the determination of controls that that are critical for food safety (critical control points) HACCP can help managers ensure that sufficient attention and control is given to catering operations that are critical to final food safety.

Whilst HACCP is an internationally recognizes system and used increasingly within food manufacture, formal documented HACCP section are not ideally suited to the catering environment as means or ingredients can change on daily basis. However, although the formulated. HACCP are inappropriate for most catering units, the principles of HCCP are still applicable.

3.2.1 Legislation

The Food Safety (General Food Hygiene) Regulations 1995 will place a new requirement on food business proprietors to identify any steps on

their activities which are critical to food safety and ensure that adequate controls are identified implemented and maintained. Whilst the approach specified in the Regulation requirement is similar to the approach taken by any HACCP system the Regulations require attention principles of HACCP. The Regulations do not explicitly require that the management system in place has to be documented.

Documentation however, should be regarded as good practice, particularly in the event of food problems. Documentation totally packed useful in any defence of 'due diligence' Section 21 of the Food Safety Act 1990 provides the defence of taking all reasonable with any such defence.

3.2.2 The Principles of HACCP

The general principles of the HACCP approach, which are in fact replicated in the '95 Regulation represent are

- Anlaysing the potential food hazards in a food business operation;
- Identifying the points in those operations where food hazards may occur;
- Deciding which of the points identified are critical to food safety
- Reviewing the above procedures in the event the process or operation changes.

Documenting the system and in particular records of monitoring is not an express legal requirement. However, it should be regarded as good and will assist proper management control of the system.

3.2.3 HACCP – In Practice for other Caterers

Hazard Analysis – A hazard is anything that may cause the food to be unsafe for consumption Hazard and food safety
Microbiological eg salmonella contamination;
Chemical e.g. contamination with foreign bodies such as glass or metal.

The catering operation should be examined step by step from the receipt of the raw materials at the back door to safe or competent the final completed menu item. It will be helpful to draw up a flow diagram which describes the catering operation step by step. Consider all the hazards that may occur at each catering step and the like hood of them occurring during normal or even occasional practice. Next, consider way to control the possible hazard and identity those control which are critical.

Critical Control Points- A critical control point is a point or step in the preparation of the food which has to be carried out correctly to ensure

that a hazard is eliminated or eliminated to a safe level. Critical control points must therefore be monitored to them that routine control is occurring as no further step or control will subsequently rectify the problem. The frequency of monitoring will depend on the nature of the control, practicality, and the level of confidence the monitoring procedure. Generally, monitoring should be as simple to possible.

Student Assessment Exercise

Mention one principle of HACCP.

3.2.4 Example of likely CCPS in Catering

Receipts – checks (including temperature check) of goods on delivery
Storage – Temperature control and contamination avoidance during storage
Food preparation- old cross contamination, good temperature control
Cooking – through cooking of products, where necessary
Hot holding – food for hot holding to be held above 63OC
Personal hygiene and health standards – avoid contamination of produces
Cleaning procedures – effective cleaning of surfaces and equipment.

3.2.5 How to Maintain HCCP

Establish targets and critical limits each CCP eg for fridge temperature or even handling pictures the target you should gave the control you require. Monitor the CCPS routinely to ensure the targets being met where monitoring shoes the ventilation the target level corrective action should be taken.
If there is a major change with regard to the ingredients used, the cooking process or style of operation should review that process to see whether the change introduces any new hazard, which might require revised or new controls.
Ensure any monitoring equipment is routinely tested to ensure its continued accuracy thermometers for example should be routinely calibrated or tested against a calibrated thermometer where they are being used to monitor any critical control point.
Ensure any staff training or instruction includes information on the food safety management system in place the role of any individual in the system particularly any critical control pints under the individual's control.
The system should work for you. Whilst the law requires that a system of control should in place the allows the catering manager the flexibility to ensure it is suited to the need of the business.

4.0 CONCLUSION

Safety is an all-embracing language in the interest of those staff working in the kitchen as well as the food they prepare.

5.0 SUMMARY

In this unit, we've discussed in clear terms safety as it affects the staff and the food they prepare.

6.0 TUTOR-MARKED ASSIGNMENT

Highlight 4 practical measures for controlling slips and trips.

7.0 REFERENCES/FURTHER READINGS

HCCP in Catering: Help or Type R.M. Campden Food and Drink Research Association October 1989

Campden Food Preservation Research Association (1987) Guidelines to the Establishment of Hazard Analysis Critical Control Point (HACCP) , Technical Manual No. 19

Hygiene and Hazard Analysis in Food Servcie J. Shperd, M. Kipps and J. Thompson in Progress in Tourism Recreation and Hospitality Manager Volume 2 1990 Belhave Press in Association with the University Survey.

Assured Safe Catering

A Management system of Hazard Analysis

Department of Health –HMSO

HACIMA Technical Brief No 27.

Supplier Selection

SAFE

British Hospitality Association

COSHH Control of Substances Hazardous to Health Regulation 1988 S/1988 No 1657 – HMSO.

MODULE 2

UNIT 1 FOOD SAFETY

CONTENTS

1.0 INTRODUCTION

The Regulations came into force on 15th September 1995. They aim to ensure common food hygiene rules across the European Community as set out in the Food Hygiene Directive (93/43/EEC).
The Regulations apply to all types of food and drink and their ingredients. Some businesses, generally manufacturers of products of annual origin, such as dairies or wholesale fish markets, are subject to their own product specific regulations.

The Regulations requires all food business proprietors to identify and control food safety hazards.

This document should be regarded as a guide only.

2.0 OBJECTIVE

3.0 MAIN CONTENT

3.1.1 Main Requirements of Schedule 1 of The Regulations

General requirements for food premises

Food Premises: Keep clean and in good repair and good condition layout design

Construction and Size: Should permit good hygiene practice and be easy to clean and/or disinfect and should protect food against external sources of contamination such as pests

Sanitary and Hand washing facilities: Adequate facilities must be available and lavatories must not lead directly into food handling rooms

Wash basins: Must have hot and cold (or appropriately mixed) running water and materials for cleaning and drying hand. Where necessary there must be separate facilities for washing food and hands. Soap and suitable hand drying facilities must be provided.

Ventilation:	There must be suitable and sufficient means of natural or mechanical ventilation. Ventilation systems must be accessible for cleaning e.g. give easy access to filters.
Lighting:	Food premises must have adequate natural and/or artificial lighting
Drainage:	Adequate drainage facilities must be provided
Changing facilities:	Adequate changing facilities must be provided where necessary.

Specific requirements in rooms where foodstuffs are prepared, treated or processed.

Rooms where food is actually prepared, treated or processed:
Floors, walls, ceilings, and surfaces (which come into contact with food) must be adequately maintained easy to clean and where necessary disinfected.
Cleaning and disinfecting of tools, utensils and equipments:
Provide adequate facilities including hot and could water for cleaning and where necessary sterilizing tools and equipment.
Washing of food:
Where appropriate, provide adequate facilities for washing food. Supply with hot and/or cold water as required.

Requirements for movable and/or temporary premises (such as marquees, market stalls, mobile sakes vehicles), premises used primarily as a private dwelling house, premises used occasionally for catering purposes and vending machines.
Requirements for premises and vending machines:
The sitting, design and construction must aim to avoid contamination of food and harbouring of pests.
Working practices for moveable or temporary premises:
Surfaces:
Surfaces in contact with food must be easy to clean and where necessary sanitize.
And (d) Cleaning of utensils and foodstuffs:
Adequate provision must be made for cleaning foodstuffs and the cleaning and where necessary sterilizing utensils and equipment.
Hot and cold water supply:
An adequate supply of hot and/or cold potable water must be available.
Waste storage and disposal:
Adequate arrangements for storage and disposal of waste.

Self Assessment Exercise

Mention and explain 2 main requirements for food premises.

Transport

Containers and vehicles used for transport of food:
Where necessary their design them to be adequately cleaned and disinterred.
Dedicated containers and vehicles used for bulk transport of food in liquid, granular or power form: containers or vehicles used must be reserved for food only and marked as such vehicle risk of contamination.
Containers or vehicles used for different foods or for both food and non-food products: where necessary separate products effectively to protect against the risk of contamination.
Container of power form:
Container or vehicles used for different foods or for both food and non-food products:

Where necessary separate product effectively to product against the risk of contamination

Where different products have been carried in the same containers:

effectively clean them between loads to avoid the risk of contamination

Minimizing the risk of contamination: Foodstuffs in conveyances or containers must be placed so as to minimize the risk of contamination

Equipment requirements.

Equipment requirements. Articles, fittings and equipment that can come into contact with food shall be mach such materials and maintained so that they, and the surrounding areas, can be kept clean and vehicle necessary disinfected**.**

Food Waste

Food and Other Waste: Do not allow food and other waste to gather in food rooms, unless this is unavoidable for the proper functioning of the food business.

Containers for food and other waste: containers must be closable unless he environmental health services are satisfied that this is not appropriate. They must be kept in good condition and where necessary be easy to clean and disinfect.

Arrangements for the storage and removal of refuse: Refuse stores must be designed and constructed for easy cleaning and prevent pest-gaining access. Arrangements must be made for the proper periods removal of the refuse

Water supply

Water supply: There must be an adequate supply of potable (drinking) water

Ice: Where appropriate ice must be made from potable water to prevent contamination.

Personal Hygiene

Personal Hygiene: Food handlers must wear suitable clean and where appropriate clothing everyone in a food handling area must maintain a high level of personal cleanliness.
Infected food handlers: No one suffering from or a carrier of a disease which could be transmitted through food should work in a food handling area. Provisions applicable to food stuffs
Raw Materials: No raw materials or ingredients should be accepted if known or suspected of being contaminated and which would still be unfit after, normal sorting or processing .

Protection of raw materials form contamination: At any stage of the business operation food must be protected from contamination likely to render it unfit for human consumption.
Training: All food handlers must be supervised and instructed and /or trained in food hygiene matters to a level appropriate to their job.

3.1.2 Temperature Control

The food safety (Temperature Control) Regulations 1995 which came into force on 15th September 1995 require foods which likely to support the growth of pathogenic micro organisms or the formation of toxins to be held at or below BC or above 63^0C

Cook Chill in Catering

Introduction

Cook chill catering can be defined as a system of preparing, cooking and rapidly chilling food within a prescribed time and storing it at low temperature, 0.3^OC, prior to its re-generation immediately before consumption.

The concept is that prolonged storage for up to 5 days (including the day of production and the final can be under taken without adversely affecting the bacteriological and organoleptic quality of the food.

This technical brief gives an overview of he technique of cook chill catering and readers are referred to the cook chill guidelines as assisted by the Department of Health.

Scope

In the majority of cases, pre-prepared chilled products where re-heating is carried out should be considered cook chill catering

Time and Temperature Limits

- The underlying objective of cooks chills catering to extend the food's high quality of life.
- Chilling should commence within 30 minutes of he food being cooked to 7^0C for at least 2 minutes
- Food must be chilled down to a temperature of 30C within a period of 90 minutes. Whole joints above 2.5kg should not be used .
- The food must be stored between 0 and 3^OC and the storage life must not exceed 5 days
- Whichever distribution method is chosen, the cook chill guidelines issued for caterer state that if the food exceeds 5^OC it should be consumed within 12 hours or discarded. If food exceeds 10^OC unless consumed immediately. It must be discarded
- When removed from its chilled storage for regeneration, the cooked food must be reheated to a core temperature of 70^OC fro at the least 2 minutes.
- The food safety (Temperature Control) Regulations 1`995 require both catering and retail establishments to store and display certain categories of food at 8^OC or below.

Advantages of Cook Chill Catering

- Maximizing the use of skilled staff at the production unit.
- Semi-skilled staff will be required at the service operation. In many instances, whist equipment at a higher cost is required, there is the opportunity for greater productivity and pay back.
- Improvements in standards of quality, presentation and portion control can be achieved.
- The system provides definite control of food hygiene standards because of the strict temperature control

requirements to deploy labour adoption of HACCP principles (see technical brief No 5)

- Saving of energy labour and less waste are valuable features of the system. Cook chill provides opportunities to deploy labour and equipment more efficiently whilst saving materials and providing better opportunities to practice good hygiene management.

Disadvantages of Cook Chill Catering

There is a necessity for extremely though training and supervision as small food handling mistakes can lead to potentially large food poisoning outbreaks. Management and chefs to be conversant with production control disciplines as they are now producing products as opposed to just making food and serving it.

Key Points

Raw materials must be of the highest quality and freshness and must be stored separately from the finished product.

Emphasis should be placed on checking sources of supply for meeting quality criteria; that food is receive at the right and transferred to right temperature/conditions; storage after removal (where appropriate) from cartons and transfer to hygienic storage container.

Every effort must be made to avoid the risk of cross contamination during preparation and storage.
The highest standard of personal hygiene must be maintained.
Close attention to time and temperature controls are essential.
Cooking must take place as soon as possible after preparation to avoid any spoilage, deteriorating of quality or bacterial growth.
The rate of cooling of the food will depend on a number of factors including container size shape or weight, food density moisture content, etc.
The product must be marked with the date of production and a strict system of stock control must be in operation. There should be close attention to the distribution of food with regard to temperature control.
For reasons of safety and palatability the food must be reheated quickly.
Food to be served cold should be consumed within four hours after removal from the chilled storage.
No food once reheated, should be returned to the refrigerator. All unconsumed, reheated foods should be discarded.

Danger Points

Insufficient initial cooking especially of meat and poultry to kill off any bacteria present
Insufficient time in the blast chiller, to achieve the required temperature
The addition of any extras to the food products after blast chilling or addition processes, e.g the addition of garnishes such as parsley
Any delay between production, blast chilling, bacthing and transfer to the holding refrigerator.
Breakdown of the holding refrigerator.
During transfer of food to the vehicle from waiting on loading bays.
Breakdown of the refrigerated vehicle.
Unloading and transportation of food through streets, factories or offices.
Not closing the doors of the delivery vehicle whilst a delivery is in progress.
Breakdown of the holding refrigerator at the end user.
Food awaiting regeneration.

Small Operations-Part Pre-Cooking Of Meals And Brought-In Finished Products

In situation where small quantities of vegetables or part meals are prepared in a normal catering establishment, not normally associated or having the facilities for cook chill catering the basic principles identified within this document should apply that is:
Center temperature of the food during cooking much reach $70^{O}C$
Rapid cooling to reduce the temperature of the food below 3Oc (if necessary by division of food into shallow containers).
Use within 12 hours if the food rises or remains above 5Oc
Any food that rises above 10OC and not consumed immediately should be discarded.
Particular attention should be given to the protection from risk of cross contamination within a refrigerator. Cook chill food should not be stored with raw products.
Reheating rapidly to above $70^{O}C$ center temperature for minimum of 2 minutes prior to service.
Where food products, which are produced by an external supplier, the same temperature control parameters apply and in any event the self by date must not be exceeded.

Self Assessment exercise

Mention 2 Danger points under cook chill in catering.

4.0 CONCLUSION

Regulations are good control measures only when they (the regulations) are complied with.

5.0 SUMMARY

This unit has discussed food safety regulations and cook chill in catering practices.

6.0 TUTOR-MARKED ASSIGNMENT

Enumerate 4 advantages of cook chill catering

7.0 REFERENCES/FURTHER READINGS

Food Safety Act 1990

A Guide to Cook-chill Catering Lewis Napleton, International Thomson Business Publishing 1991

Food safety Act 1990: Code of Practice 1-13 HMSO 1991

Chilled and Frozen Guidelines on Cook – Chill and Cook-Freeze Catering Systems, Dept of Health 1989

Guidelines of the Handling of Chilled Foods: IFST, IFST 1990

Crooner's Practical Food Hygiene Manual Croner Publications, 1991

Food Safety (General Food Hygiene) Regulations 1995

UNIT 2 IMPORTANCE OF HYGIENE

CONTENTS

1.0 INTRODUCTION

Hygiene is the science and practice of preserving wealth and is one of the most important subjects for all person working in the Hotel and catering industry.

2.0 OBJECTIVE

After reading through this unit, the student would have had sufficient knowledge about the important of hygiene.

3.0 MAIN CONTENT

3.1 Why Is Hygiene Important?

Purchase: High risk (ready to eat) foods contaminated with food poisoning bacteria or toxins (Poison produce by bacteria). Buy from reputable supplier only. Specify maximum temperature at delivery.

Receipt of food: High risk (ready to eat) foods contaminated with food poisoning bacteria or toxins. Checks it looks smells and feels right. Check the temperature is right.

Storage: Growth of food poising bacteria toxins on high risk (ready to eat) foods contaminated with food poisoning bacteria or toxins. High risk food stored at saved temperature store them wrapped. Label high risk foods with the correct sell by date. Rotate stock and use by recommended date.

Preparation: Growth of food poising bacteria toxins on high risk (ready to eat) foods contaminated with food poisoning bacteria or toxins. Wash your hand before handling food. Limit any exposure to room temperature doing preparation. Prepare with clean equipment and used this for high risk (ready to eat) food only. Separate cooked food from raw foods.

Cooking: survival of food poisoning bacteria. Cooked rolled joints. Chicken reformed it e.g. burgers, so that thickest part reaches at least 75^0C see the outside of other solid meat cut (e.g. joints of beef steaks) before cooking.

Cooling: growth of any surviving spores of food poison bacteria production poisons by bacteria contamination with food poison bacteria cook food as quickly as possible. Don't leave at room temperature to cool

Hot holding: Growth of food poising bacteria toxins on high risk (ready to eat) foods contaminated with food poisoning bacteria or toxins. Keep food hot about 63^oC.

Reheating: survival of food poising bacteria reheat above 75^oC

Chilled storage: Growth of food poising bacteria keep temperature at right level label high risk ready to eat foods with correct date code.

Serving: growth of disease causing bacteria production of poison by bacteria contamination. COLD SERVICE FOODS, serve high risk focus as possible after removing from refrigerated storage to avoid them getting warm, HOT FOODS. serve high risk foods quickly to avoid cooling down.

Self Assessment Exercise

Mention a point under assured safe catering

Hygiene is the sciences and practice of preserving health and is one the most important subject for all person working in the Hotel and Catering Industry to study, understanding and practice in their everyday working lives. The subject is broken down into three areas person, food and kitchen hygiene all of equal important.

3.1.1 Personal Hygiene

Germs or bacteria are to be found in and on the body and they can be transferred anything with which the body comes in contact. Personal cleanliness is essential to prevent germ getting onto food.
Personal Cleanliness
Self-respect is necessary in every food- handler because a pride In one appearance prevent a high standard of cleanliness and physical fitness. Persons suffering from ill- health or what are not clean about themselves should not handle food

Bathing

It is essential to take a bath or a shower every day (or at least two or three times a day). Otherwise germs can be transferred onto cloth and so onto food particularly in warm weather.

Hands

Hand must be washed thoroughly and frequently, particularly after using the toilet before commencing work and during the handling of food.

They should be washed in hot water with the aid of a nailbrush and bacterial so. This can be dispensed from a fixed container in a liquid or gel- form and is preferable to, which can accumulate germs when passed from hand to hand. After washing, hand should be rinsed and dried on a clean towel, suitable paper towel or by hand hot- air drier.

Hand and fingernails can be a great source of danger if not clean, as they can so easily transfer harmful bacteria on to the food
Rings (except for a plain wedding band), watches and jeweler should not be worm where food is handled. Particles of food may be under the ring and germs could multiply there until they are transferred onto food.

Watches should not be worm because some foodstuffs have to plunged into plenty of water apart from this. The steam in a kitchen will ruin watches that are not waterproofed anyway.

Jewelery should not be worm since it may fall into food, unknown to the wearer small sleeper for pierced ears are however permissible.

Fingernails

These should always be kept clean and short as dirt can easily lodge under the nails and be dislodged when. For example Marking pastry. So

introducing bacteria into food. Nails should be cleaned with a nail brush and nail vanish should not be worm.

Hair

Hair should be washed regularly and kept covered where food is being handled. Hair that is not cared for is likely to come out or shed dandruff which may fall into food. Men's hair should be kept short as it is easier to keep clean; it also looks neater. Women's hair should be covered as much as possible. Both men's and women's hair can be kept in place using hair lacquer or a hair net. The hair should never be scratched, combed or touched in the kitchen, as germs could be transferred via the hands to the food

Nose

The nose should not be touched when food is being handled. If a handkerchief is used, the hand should be washed afterwards. Ideally, paper handkerchiefs should be used and then destroyed and the hands washed afterward. The nose is very important that neither food people nor working surface are sneezed over, so spreading germ.

Mouth

There are many germs in the area of the mouth, therefore the mouth or lip should not be touched by the hands or utensils which may come into contact with food. No cooking utensils should be used for tasting food, nor should finger be used for this purpose as germ may be transferred to food, A clean teaspoon should be used for tasting and washed well afterwards.

Coughing over foods and working areas should be avoided as germ are spread long distance if not trapped in a handkerchief.

Ear

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

Teeth

Should teeth are essential to good health. They should be kept clean and visit to the dentist should be regular so that teeth can be kept in good repair.

Feet

As food hand era are standing for many hours, care of the feet is important. They should be washed regularly and the toenail kept short and clean. Tired feet can cause general fatigue, which leads carelessness, and this result in a lowering of the standards of hygiene.

Cut Burns and Sores

It is particularly important to keep all cuts, bums scratched and similar opening of the skin covered with a waterproof dressing. Where the skin is septic(as with certain cuts spots, sores and carbuncles) there are vast number of harmful bacteria which must not be permitted to get on food in most cases people suffering in this way should not handle food.

Cosmetic

Cosmetic, if used by food-handlers should be used in moderation, but ideally their use should be discouraged. Cosmetics should not be put on in the kitchen and the hands should be washed well afterwards, they should be put on a clean skin, not used to cover up dirt.

Smoking

Smoking must never take place where there is food because when a cigarette is taken from the mouth, germs from the mouth can be transferred to the fingers and so on to food. When the cigarette is put down the end, which has been in the mouth can, transferred germs on to working surface. Ash on food IS in offence against the law.

Spitting

Spitting should never occur, because germs can be spread by this object unable habit

Clothing and Cloths

Clean whites (protection clothing) and clean underclothes should be worn at all time> Dirty cloths enable germs to multiple and if dirty clothing comes into contact with food may be containing comes into contact with food the food may be conterminal. Cloths used for bolding hot dishes should also be kept clean as the cloths are used in many ways such as wiping dishes and pans. All these could convey germs on to food.

Outdoor clothing and other clothing, which has been taken off before wearing whites should be, kept in a locker, away from the kitchen.

3.1.2 General Health and Fitness

The ambiance of good health is essential to prevent the introduction of germ into the kitchen. To keep physically fit adequate rest exercise fresh air and a wholesome diet are essential.

Sleep and Relaxation

Persons employed in the kitchen require adequate sleep and relaxation as they are on the move all the time, often in a hot atmosphere where the tempo of work may be very fast. Frequently, the hours are long or extended over a long period of time, as with split day, or they may be extended into the night. In off-duty periods it may be wise to obtain some relaxation and rest rather than spend all the time energetically. The amount of sleep and rest required depends on each periods need and the variation between one person and the next is considerable.

Exercise and Fresh Air

People working in conditions of nervous tension, rush, heat and odd hours need a change of environment and particularly fresh air. Swimming, walking or cycling in the country may be suitable way of obtaining both exercise and fresh air.
Wholesome food and pure water

A well-balanced diet correct cooked, and pure water will assist in keeping kitchen personnel fit. The habit of picking (eating small pieces of food while working) is bad; it spoils the appetite and does not allow the stock to rest.
Meals should be taken regularly; along period without food are also bad for the stomach. Pure water is ideal for replacing liquid lost in perspiring in a hot kitchen, or soft drinks may be taken to replace some of the salt as well as the fluid lost in sweating.

3.3.3 Kitchen Clothing

It is most important that people working in the kitchen should wear suitable clothing and footwear. Suitable must be:
1. Protective 2 Washable 3 of a suitable colour
4 light in weight and comfortable 5. Strong 6 absorbent.

Aprons

These are designed to protect the body from being scalded or burned and particularly to protect the legs from any liquids which may be spilled; for this reason the apron should be of sufficient length to protect the legs.

Chefs Hat

These designed to enable air to circulate on top of the head and thus keep the head cooler. The main purpose of the hat is to prevent loose hairs from dropping into food and to absorb presentation of the forehead. The use of light weight disposable hats is both acceptable and suitable.
Suitable clothing must be worn in the kitchen.

Footwear

This should be stout and kept in good repair so as to protect and support the feet. As the kitchen staff are on their feet for many hours, boots (for men) and clogs (for men and women) grounded support and will be found most satisfactory.
Modern industrial safety shoes with steel toecaps are to be encouraged. Sandals, training shoes etc are insufficient protection from spillage of hot liquid.

Washable

The clothing should be of an easily washable material as many changes of clothing are required.

Colour

White clothing is readily seen to be soiled when it needs to be changed and there is a tendency to work more cleanly when wearing ‘whites’ Chefs trousers of blue and white check are a practical colour but also require frequent changing.

Light and Comfortable

Clothing must be light in weight and comfortable, nct tight. Heavy clothing would be uncomfortable and a heavy hat in the heat of the kitchen would cause headaches.

Absorbent

Working over a hot stove causes people to perspire; the perspiration will not evaporate in an inadequately ventilated atmosphere and so underclothes made from absorbent material, such as cotton, should b worn. The hat absorbs perspiration and the neckkerchief is used to prevent perspiration from running down the body, for wiping the face and also to protect the neck which easily affected by draughts.

Self Assessment Exercise

What do you understand by 'washable' under kitchen clothing?

Essentials	**Awareness**
Personal cleanliness and dress	The organizations policy or food hygiene
Hand washing	Personal hygiene
The need to report infections and cover cuts	Cross contamination and food storage
The need for temperature control i.e keep food either hot or cold	Awareness of pests
Keep surface clean	

Summary of Personal Hygiene

The practice of clean habits in the kitchen is the only way to achieve a satisfactory standard of hygiene. These habits are as follows:

- Hand must be washed frequently and always after using the toilet. Foods should be handled as little as possible.
- Bathing must occur frequently.
- Hair must be kept clean and covered in the kitchen; it should not be combed or handled near food
- Nose and mouth should not be touched with hands.
- Cough and sneeze in an handkerchief, not over food; people with colds should not be in contact with food.
- Jewellery, rings and watches should not be worn.
- Smoking and spitting must not occur where there is food
- Cuts and burns should be covered with a waterproof dressing.
- Clean clothing should be worn at all times and only clean cloths used.
- Foods should be tasted with a clean spoon.
- Tables should not be sat on
- Only healthy people should handle food

4.0 CONCLUSION

The importance of hygiene cannot be overemphasized in every day endeavor of any human being, particularly professional caterer.

5.0 SUMMARY

In this until we discussed the importance of hygiene highlight person cleanliness, general healthy and fitness and kitchen clothing .

6.0 TUTOR-MARKED ASSIGNMENT

Enumerate 4 habits under personal hygiene as far as satisfactory standard is concerned.

7.0 REFERENCES/FURTHER READINGS

Kinton, Ronald (1996). The Theory of Catering.

UNIT 3 FOOD HYGIENE (AMENDMENTS) REGULATION 1990/1991

CONTENTS

1.0 INTRODUCTION

Hygiene is the science and practice of preserving health and is one of the most important subjects for all staff working in the hotel and catering industry.

2.0 OBJECTIVES

After reading through this unit the student ought to have had enough knowledge about food Hygiene food safety and standard Agency.

3.0 MAIN CONTENT

3.1 Food Hygiene (Amendments) Regulation 1990/1991

These amendments specify the temperature controls for certain foods .they also apply to foods in transit and catering operations using mobile facilities .
Certain foods should be kept at 80c (46 of) or under.
Certain foods should be kept 5oc(41of) or under.
All not food must be kept at above 63oc(115of).
Although chilling expend shelf life of foods, high standards of hygiene and control of storages life is essential.
Storage temperature of below 5oc(41of) for all perishable should be achieved as quickly as possible.
The regulation relate to the temperature of the food not to the air temperature of the chiller unit or hot cupboards.
To comply with the regulation regular and frequent checks must be made to monitor temperature.

3.1.1 Practical Implications

On receipt deliveries should be cooled to the proper temperature as soon as possible.
To account foremost cycle or breakdown of refrigeration an allowance of 2oc(3oF) is permitted.
A maximum time of two hours for cold food preparation in the kitchen is tolerated provided there is no more than 2oC(3oF) rise above the 5oC(41oF) or 8oC (46oF) specified temperature.

Food intended to be served hot at 63oC(115oF) or above can be held at a temperature low 63oc(115oF) but for no more than two hours.
Exception is made for foods served warm (hollandaise sauce). They may be kept for more then two hours and any remaining must be discarded.
Foods intended to be served cold 5Oc (41oF) or 8oC (46oF) may be held at a higher temperature but for no longer than four hours; it must than be brought back to 5oC () or 8oc (46oF).
Displayed foods (sweet trolley, cheese, board, self –service display, counter display assisted service) need not be maintained at the required temperature provided display kept to a minimum and dose not exceeds four hours.
The main food hygiene regulations of importance to the caterer are the following
Food safety (general Food Hygiene) regulations 1995;
Food safety (Temperature control) regulations 1995

These implemented EC Food Hygiene directive (93/43 EEC). They replaced a number of different sets of regulations including the Food safety (general) regulations 1970

THE 1995 REGULATIONS are similar in many respects to earlier regulations .as with the Health and safety legislation, these regulations piece a strong emphasis on, and managers to identify the safety legislation, these regulations place a strong emphasis on and managers to identify the safety risks, and to design and implement appropriate system prevention contamination. These systems and procedures are covered by Hazard and critical control points and/or Assured safe catering.

The regulations place two general requirements on the owners of food businesses
1 To ensure that all food-handling operators carried out hygienically and accord to the Rules of Hygiene
2 To identify and control all potential food safety hazards, using a systems approach AACCP or assured safe catering.

In addition there is an obligation by any food handler who may be suffering front a disease, which could be transmitted, thought food to report this to the employer, obliged to prevent the person conceded from handling food.

Catering establishments have a general obligation to supervise, instruct and providing in food hygiene commensurate with their employees responsibilities. Details with regulations much training required are not specified in the regulations However the HMSO in any guide to catering proves guidance on training, which can be taken as a general, comply with the legislation.
The HMSO guide suggests three categories of food handler, all of which need trains
Category A – support and front of house staff including storekeeper, waiter/waiter staff, counter staff, counter assistant, cellar person etc
Category B – These involved in the preparation of high risk (unwrapped) foods include chefs cooks, catering supervisors, kitchen assistants and bar staff when food.
Category C – Managers or supervisors who may handle food including all such
Before any food handler stares work they must be give written and verbal instructions in the essentials of food hygiene.
The second stage of training is hygiene awareness instruction.

3.1.2 Formal Training

Formal food hygiene training as suggested by the industry guide, going beyond essentials and awareness, is recommend to comply with the law.

A Guide To The Training Of Individuals In Food Handling

Category of staff	Essentials of food hygiene	Hygiene awareness instruction	Formal training level	Formal training level 2 and/or 3
A storekeeper Waiting staff Bar staff Catering Assistants	Yes before starting work.	Yes within 4 week (8 weeks for part-time staff.	No	No
B Chef cooks supervision Food preparation Assistants	Yes before starting work.	Yes with 4 weeks or 3 months for part times.	Yes	No
C Mangers supervisors	Yes before starting work.	Yes within 4 weeks.	Yes within 3 months.	Yes but only good practice not essential.

Formal Training beyond Essentials and Awareness Level 1

The overall aim of this training is to provide a firm foundation of basic knowledge in the following discipline;

- Food poison micro-organisms – sources and types together with simple microbiology;
- Common food hazards – physical and microbiological;
- Personal hygiene – responsibilities,
- Pest prevention and control;
- Cleaning and disinfections;
- Food storage and preparation including temperature control;
- Legal requirements.

The duration of such a course is suggested to be at least six hours.

LEVEL 2

This is more advanced training than level 1 and should cover more detail especially about management and food safety monitoring system. Recommended duration around 12 – 24 hours.
This is known as the intermediate level.

LEVEL 3

This would be aimed at the more advanced food hygiene training and would provide management with the ability to manage and evaluate hygiene systems such as HACCP and Assured safe caterings

Recommended duration of training 24 - 40 hours. This is known as Advanced Hygiene for Managers, and is an essential qualification for those who wish to train employees in essential food hygiene. It is also strongly advised that those who wish to deliver the essential hygiene take a trainer skill qualification as well.

Self Assessment Exercise

What is hygiene?

3.2.1 Registration of Premises

Under the food premises (Registration) Regulation 1991 as amended by the food premises (Registration) Amendment Regulations 1993 all existing food premises in England Wales and Scotland .have to register with their local authority.

Anyone starting a new food business must register 28 days before doing so . it is an offence not to be registered.

3.3 Summary of Food Hygiene

3.3.1 Dangers to Food

- Chemical copper lead. e t c
- Plant toadstools.
- Bacteria {cause of most cases of food poisoning}

3.3.2 Bacteria

- Almost everywhere net all are harmful.
- Must be magnified 500-1000 times to be seen.
- Under deal conditions they multiply by dividing in two every 20 minutes.

3.3.3 Sources of Food – Poisoning Bacteria

- Human –nose throat, Excreta, Spots, Cuts, Etc
- Animal – excreta
- Foodstuffs – meat, Eggs, milk, from animal corners.

3.3.4 Method of Spread of Bacteria

- Human –coughs. Sneezes. hands.
- Animals – excreta (rats, mice, cows, pets, etc.). Infected carcasses.
- Other means – equipment. China. Towels.

3.3.5 Factors Essential for Bacterial Growth

- Suitable temperature.
- Time.
- Enough moisture.
- Suitable food.

3.3.6 Methods of Control of Bacterial Growth

- Heat – sterilization, using high temperatures to kill all micro-organisms,
- Pasteurization using lower temperatures to kill harmful bacteria only,
- Cooking.
- Cold - refrigeration at 3-5oc (3-41of) stops growth of food poisoning bacteria and retards growth of other micro-organisms,
- deep freeze at –18oC (0oF) stops growth of all micro-organisms.
- Student assessment question mention one method of control of bacteria growth.

3.3.7 Foods Commonly Causing Food Poisoning

- Poultry.
- Made-up meat dishes.
- Trifles. Custards. Synthetic cream.
- Sauces.
- Left-over foods.

3.3.8 Common Causes of Food Poisonings

- Food prepared too far in advance.
- Storage at ambient temperature.
- Inadequate cooling.
- Inadequate reheating.
- Contamination processed food.
- Undercooking.
- Inadequate thawing.

- Cross contamination.
- Improper warm holding.
- Infected food handlers.

3.3.9 Food Poisoning Prevention

- Comply with the rules of hygiene.
- Take care and thought.
- Ensure that high standards of cleanliness are applied to premises and equipment.
- Prevent accidents.
- Specific points to be applied.
- High standards of personal hygiene.
- Attention to physical fitness
- Maintaining good working conditions.
- Maintaining equipment in good repair and clean.
- Use separate equipment and knives for cooked and uncooked foods.
- Ample provision of cleaning facilities and equipment.
- Correct storage of foods at the right temperature.
- The theory of catering
- Safe reheating of foods
- Quick cooking of foods prior to storage
- Hygienic waning up procedure
- Food handlers knowing how food poisoning is caused.

Due Diligence Defence

Every food handler, whether they prepare, manufacture, serve or transport the food, has a responsibility to make sure the food is safe to eat. if the food is found to be unfit to eat, the person responsibility will be prosecuted unless he or she can prove they took all responsible precautions, that he or she exercised all due diligence to avoid causing the offence, This defense can be established if a food handler can prove that it was the fault of another person ,or someone that they trusted carried out all the necessary checks, that he or she had no reason to believe that their omission or action which they had taken would result in an offence.

A due diligence can be claimed if a caterer was supplied with ready prepared meals which after consumption caused food poisoning. The caterer would have to prove that he or she had take all reasonable precautions to avoid the situation occurring by carrying out all the necessary checks on the method of predication and by obtaining details of storage and transportation temperatures of the food before delivery.

Written record which show dates and the types of checks made are very important and would form a crucial part of the evidence.

3.4 The Food Safety and Standards Agency

The UK has, along with other countries. Over the last ten years experience a number of food scares. Examples are salmonella in eggs. Listeria in pates and soft cheeses, BSE in beef which has come to be associated with the new variant CID and the appearance of a new virulent strain of E-coli 0157 which led to the death of twenty pensioners in Scotland in 1996. All these scares have given rise to increasing concert amongst the public, the scientific and medical communities.

In April 1997 The Food standards Agency an interim proposal, was published. The new Labour government. Cleared in May 1997 decided to go ahead with the proposal in the restore public confidence in the food chain in June 1997 the core membership of the new Food standard Agency saw established The new group is made up of a number of the food.

- Additives and novel foods;
- Food contaminants;
- Radiological safety;
- Nutritional unit;
- Food labeling and standard;
- Food hygiene;
- Meat hygiene;
- Veterinary public health unit;
- Food standard safety Division.

The Food standard Agene would be a non-departmental public body accountable to parliamen. Through health ministers and operating on a basis of openness and transparency. The brief was to

Create a clear separation between the responsibilities for regulating food safety and for promoting the interests of food related industries;

Promoting food safety from ‘farm to plate’.
The government also plants to further develop the role of advisory committees who advise government on all food safety matters, for example The Food Advisory committees will take on a special role in handling food safety issues that go beyond the remit of any one expert committee.
These committees should act as independent bodies.

On 1 September 1997 the new Joint Food safety and standards group stated work. The group aimed to bring together key officials from the department of Health and the Ministry of Agriculture. Fisheries and Food who. Have the job of establishing the Food Agency. In October 1997 the development was put on hold.

Scientists at the Ministry of Agriculture, Fisheries and the department of Health have always attempted to make sure that the food we purchase is safe however the variety and breadth of their work needs to be co-ordinated and focused better. This is what the new group will attempt to do.

The creation of an independent government body to work toward improving the standards and quality of food production in the UK and in all sectors is an attempt to improve food safety in the next millennium.

3.5 Definition of Terms

Antibiotic: Drug used to destroy pathogenic bacteria within human or animals bodies.

Antibiotic: Substance that prevents the growth of bacteria and moulds, specifically on or in the human body.

Bacterial : Substance which destroy bacteria.

Carrier: Person who harbors and may transmit pathogenic organisms without showing.

Signs of illness.

Removal of soil, food residues dirt. Grease and other objectionable matter.

Occurrence of any objectionable matter in food.

Temperature tinge within which multiplication of pathogenic bacteria is possible from 10-63oC (50-145oF).

Suitable and sufficient bandages and dressings. Including waterproof dressings and antiseptic. All dressings to be in dividing warpped.

Food handling Any operation in the production. Preparation processing packaging storage.

Transport. Distribution and sale of food.

Grimaced : Agent used for killing micro-organisms

Incubation period between infection and the first signs of illness

Mildew Type of fungus similar to mould.

Moulds croscopic plants (fungi) that may appear as woolly patches on food.

Optimizing Best.

The Theory of coloring

Pathogen Disease-producing organism.

Pesticide Chemical used to kill pests.

4.0 CONCLUSION

It is imperative for all staff of any hotel or catering establishment to be conscious of importance of hygiene.

5.0 Summary

This unit has discussed food hygiene (amendment) regulation as well as food safety and standard Agency.

6.0 TUTOR-MARKED ASSIGNMENT

Mention 5 common causes of food poisoning.

7.0 REFERENCES/FURTHER READINGS

Kinton, Ronarld (1996). The Theory of Catering

UNIT 4 KITCHEN HYGIENE

CONTENTS

1.0 INTRODUCTION

In the catering industry particularly, and kitchen practices in general, absolute observance of hygienic rules and regulations are of paramount importance. Accidents can be avoided through positive management.

2.0 OBJECTIVE

After reading through this unit, the student is expected to have acquired a reasonable knowledge about kitchen hygiene.

3.0 MAIN CONTENT

3.1 Kitchen Hygiene

Neglect in the care and cleaning of any part of the premises and equipment could lead to a risk of food infection. Kitchen hygiene is of very great importance to:

Those who work in the kitchen, because clean work conditions are more agreeable to work in than dirty conditions;
The owner, because custom should increase when the public know the kitchen is clean;
The customer – no one should want to eat food prepared in a dirty kitchen.

3.1.1 Cleaning Materials and Equipment

To maintain a hygienic working environment a wide range of materials and equipment is needed. These are some of the items which need to be budgeted for, ordered, stored and issued:

- Brooms
- Brushes
- Buckets
- Cloths
- Duster
- Mops
- Spoinges
- Squeegee
- Scrubbing machine
- Wet suction cleaner
- Dry suction cleaner
- Ammonia
- Disinfectant
- Dustbin powder
- Floor cleaner
- Fly spray
- Oven cleaner
- Plastic sacks
- Scouring powder
- Soap
- Steel wool
- Washing powder

Self Assessment Exercise

Give a reason why kitchen hygiene is of very great importance.

3.1.2 Kitchen Premises

Ventilation

Adequate ventilation must be provided so that fumes from stoves are taken out of the kitchen and stale air in the stores larex and still-room is

extracted. This is usually affected by erecting hoods over stoves and using retractor fans.

Hoods and fans must be kept clean, grease and dirt are down up by the fan and, if they accumulate, can drop onto food. Windows used for ventilation should be screened to prevent entry of dust, insect and bites. Good ventilation facilities the evaporation of sweat from the body which keeps one cool.

Lighting

Good lighting is necessary so that people working in the kitchen do not strain their eyes. Natural lighting is preferable to artificial lighting. Good lighting is also necessary to enable state see into corners so the kitchen can be properly cleaned.

Plumbing

Adequate supplies of hot and cold water must be available for keeping the kitchen clean, cleaning equipment and food stuff use. For certain cleaning hot water is essential and the other heating water must be capture of meeting the requirement of the establishment.

There must be hand washing and drying facilities and suitable provision of toilets, which not be in direct contact with any rooms in which food is prepared or store.

Hand washing facilities separate from food preparation sinks must also be available in kitchen with a suitable means of drying the hands (hot air upper towels).

Cleaning of Toilets and Sinks

Toilets must never be cleaned by food-handlers. Sink and hand basins should be cleaned thoroughly rinsed.

Floors

Kitchen floors have to with stand a considerable amount of wear and tear, therefore they be:

Capable of being easily cleaned:
Smooth, but not slippery
Even;
Without cracks or operations;
Impervious (non absorbent)

Quarry tile floors or vinyl sheet or epoxy resin floors, properly laid, are suitable for kitchen since they fulfill the above requirements.

Through cleaning is essential: floors are swept, washed with hot detergent water and then dried. This can be done by machine or by hand, and should be carried out at least once a day. As a safety precaution, suitable warning signs should be used to alert staff if the floor is wet.

Walls

Walls should be strong, smooth, impervious, washable and light in colour. The joint between the wall and floor should be rounded for ease of cleaning. Suitable wall surfaces include ceramic tiles, heat resistant plastic sheeting, stainless steel sheeting, and resin bonded fiberglass.

Clean with hot detergent water and dry. This will probably be done monthly, but frequency will depend on circumstances.

Ceiling

Ceiling must be free from cracks and flaking. They should not be able to harbour dirt.

Doors and windows

Doors and windows should fit correctly and be clean. The glass should be clean inside and out so as to admit maximum light.

Food Lifts

Lifts should be kept very clean and no particles of food should be allowed to accumulate as lift shafts are ideal places for rats mice and insects to gain access into kitchen.

3.1.3 Hygiene of Kitchen Equipment

Kitchen equipment should be so designed that it can be:
Cleaned easily;
Readily inspected to see that it is clean.
Failure to maintain equipment and utensil hygienically and in good repair may cause food poisoning.

Material used in the construction of equipment must be:
Hard so that it does not absorb food particles;
Smooth so as to be easily cleaned;
Resistant to rust;

Resistant to Chipping

Containers, pipes and equipment made from toxic materials, such as lead and zinc, should not be in direct contact with food or drink or be allowed to wear excessively; copper pans that need retaining on the inside will expose harmful copper to food. Food must be protected from lubricants.

Easily cleaned equipment is fee from unnecessary ridges, screws, ornamentation, dents, and crevices or inside square corners and has large, smooth areas. Articles of equipment with are difficult to clean (mincers, sieves and stainers) are items where particles of food can lodge so allowing germs to multiply contaminate food with the utensil is next used.

Normal Cleaning of Materials

Metals as a rule all metal equipments should be cleaned immediately after use.

Portables: remove food particles and grease. Wash by immersion in hot detergent water. Thoroughly clean and a hard bristle brush or soak until this is possible. Rinse in water at 77Oc (171^{O}F) by immersing in the water in wire racks.

Fixed items: remove all food and grease with a stiff brush or soak with a wet cloth, using hot detergent water. Thoroughly clean with hot detergent water. Rinse with clean water. Dray with a clean cloth.

Abrasives: should only be used in moderation as their constant scratching of the surface makes it more difficult to clean the article next time.
Marble: scrub with a bristle brush and hot water and then dry.

Wood: scrub with a bristle brush and hot detergent water, rinse and dry.
Plastic wash in reasonably hot water.

China, earthware: avoid extremes of heat and do not clean with an **Abrasive**. Wash in hot water and rinse in very hot water.

Copper: remove as much food as possible. Soak wash in hot detergent water with the aid of a brush. Clean the outside with a paste made of sand, vinegar and flour. Wash well. Rinse and dry. Alternatively, a proprietary cooper cleaner may be used. Cooper pans are gradually being replaced in commercial kitchens, mainly due to the expense involved in retaining.

Aluminum: do no wash in water containing soda as the protective film which prevents corrosion may be damaged. To clean, remove food particles. Soak. Wash in hot detergent water. Clean with steel wool or abrasive. Rinse and dry.

Tin: tin which is used to line pots and pans should be soaked, washed in detergent water, rinsed and dried. Tined utensils, where thin sheet steel has a thin coating of tin, must be thoroughly dried, otherwise they are likely to rust.

Zinc: This is used to coat storage bins of galvanized iron and it should not be cleaned with a hard abrasive.

Vitreous enamel: clean with a damp cloth and dry. Avoid using abrasives.

Equipment requiring particular care in cleaning (sieves, conical strainers, minecers and graters). Extra attention must be paid to these items, because food particles clog the holes. The holes can be cleaned by using the force of the water from the tap, by using a bristle brush and by moving the article, particularly a sieve, up an down in the sink, so causing water to pass through the mesh. Whisks must be thoroughly cleaned where the wires cross at the end opposite the handle as food can lodge between the wires. The handle of the whisk must also be kept clean.

Aves and chopper, mandolins: these items should be cleaned in hot detergent water, dried and greased slightly.

Timmay cloths, muslins and piping bags: after use they should be emptied, food particulars scraped out, scrubbed carefully and boiled. They should then be rinsed and allowed to dry. Certain piping bags made of plastic should be washed in very hot water and dried. Nylon piping bags should not be boiled.

Cleaning of large electrical equipment (ovens, mincers, mixers, choppers, slicers)

1. Switch off the machine and remove the electric plug.
2. Remove particles of food with a cloth plate knife, needle or brush as appropriate.
3. Thoroughly clan with hand hot detergent water all removable and fixed parts. Pay particular attention to threads and plates with holes in mincers.
4. Rinse thoroughly.
5. Dry and resemble.
6. while cleaning see that exposed blades are not left uncovered or unguarded and that the guards are replaced when cleaning is complete.
7. any specific maker’s instruction should be observed.

8. Test that the machine is properly assembled by plugging in and switching on.

All equipment once cleaned should be stored properly.

3.1.4 Kitchen energy Distribution Systems

A system of this type operates from stainless steel housings (known as 'raceways') which are fastened to walls, floors, ceilings or may be island mounted. Inside the raceways are runs of electrical bus-bars or bus-wires and plumbing pipes. At intervals, appropriate for the kitchen equipment served, are switch or valve sockets, electrical, gas, water, steam, etc.

Connecting flexible cords and pipes from the kitchen equipment plug into the sockets and designed to hang clear of the floor and are smooth plastic coated for easy cleaning.

For maximum advantage from this idea, the hygiene, safety, flexibility, ease of cleaning and maintenance, most of the kitchen equipment is mounted on castors.

Periodic cleaning is carried out by pulling the equipment out from the wall or island, unplugging all the services then moving the equipment away on its castors giving free access to wall and floor surfaces as well as backs and sides of equipment.

Further information can be obtained from Erocaddy Systems Ltd, Powder Mill Lane Dartford, Kent DAI INN.

3.2 Food Hygiene

The food Safety Act 1990 includes:
Increased powers for the Environmental Health Officers;
Provision of training for food operatives;
Registration of food premises with the local authority.
The defence of 'due diligence'. If the person in charge of a catering operation can show that the or she took all reasonable precautions to avoid committing an offence then this can be used in defending any presentation under the Food Safety Act 1990/95.

Recommended reading: Technical brief No 5/95, Hazard Control and Critical control Points, HACIMA.

3.2.1 Provision of Safe Food

This is a management responsibility. In order to provide safe food a safety control system should be implemented. The HACCP approach

provides a means of ensuring the provision of safe food for the customers. HACCP stands for Hygiene Analysis and Critical Control Point.

Critical Control Points (CCPs) are the points at which control is essential to ensure that potential hazard do not actually become hazardous

Is the food delivered at the correct temperature?
Is the food stored displayed at the correct temperature?
Is cross-contamination prevented as far as possible?
Are cleaning schedules in place for equipment?

In small catering units the main principles should still apply but a modified from of HACCP is more appropriate. This is Assured Safe Catering (ASSO, ASC emphasize the importance of safety precautions in the preparation, handling and temperature control of food. It is vital that catering staff are properly trained if an ASC system is to work effectively and that record sheets are kept of controls which are in place.

The most succulent, mouth-watering dish into which has done all the skill and art of the world's best chefs, using the finest possible ingredients, way look taste and smell superb, yet by unsafe, even dangerous to eat because of harmful bacteria.

It is of the utmost importance that everyone who handles food, or who works in a place where food is handled, should know that food must be both clean and safe. Hygiene is the study of

4.0 CONCLUSION

The importance of kitchen hygiene cannot be over-emphasised in the food production area.

5.0 SUMMARY

This unit has discussed kitchen hygiene. It has also covered how to prevent chemical food poisoning and harmful bacteria from food and equipment.

6.0 TUTOR-MARKED ASSIGNMENT

Mention some Cleaning Materials and Equipment

7.0 REFERENCES/FURTHER READINGS

Kinton, Ronarld (1996). The Theory of Catering

UNIT 5 CONTROL OF WASTE AND RECYCLABLE MATERIALS.

CONTENTS

1.0 INTRODUCTION

Waste is an unwanted material usually ready to be discouraged with. Some of such waste materials are recyclable and can turned to other valuable materials.

2.0 OBJECTIVE

After reading through this until, the student would understand all about control of waste and recyclable materials.

3.0 MAIN CONTENT

3.1 Control of Waste and Recyclable Materials

Waste materials is a potential threat to food safety because it is a source of contamination which can provide food for the variety of pest.

In today's ecological climate it is in everyone's interest to be aware of the issues which affect the environment and take steps to reduce waste. The catering industry has a responsibility by the environment friendly by recycling as much as possible. The reputation of the industry could be enhance by those employed in it if they have the right attitude to the environment. it could be jeopardized if the catering industry neglected to implement recycling measures.

It is necessary to know the policy of the establishment regarding waste and to ensure that management and staff ensure that everything possible is done to encourage conservation and to practice the salvaging of as much as is possible. This include the practice of not wasting gas, electricity or water. Staff, and customers, need to be made aware and remind tactfully of this important issue. Hygiene and safety is of paramount importance such as suitable notices asking persons using electricity or water is not to waste is also important.

There may be initial costs in introducing an anti-waste policy but there could also be a saving of fuel bills and perhaps an income from sale of waste products. However this would depend on the quality involved, the area in which the establishment are situated or other factors.
Unsavory or offensive food waste. This should be disposed of immediately where possible using a waste disposal unit.
Waste cooking oils and fats. Large quantities have a resale value, small quantities can be absorbed into dry food waste.
Bulky waste. This can be disposed of by either a) incineration (only by using specific equipment or in isolated areas) or b) by compaction. The advantage of compaction are:

small, compact bulks easier to handle;
less accessibility to pests;
saving in refuse collection charges which are often charged by volume.

The refuse site should be a clean, easy to clean area with supply for washing down and adequate drainage. The site should be well lit and ventilated.

For general internal rubbish, plastic or paper lined bins which can be destroyed with the rubbish are preferable to other types of bin.

other ways to control flies are to:
screen windows to keep flies out of kitchens;
install ultra-violet electrical fly-killers (Figure 16.21, page 500);
use spray to kill flies (only where there is no food);
employ a pest control contractor.

Cockroach like warm, dark places. They can carry harmful bacteria on their bodies and deposit them on anything with which they come into contact.

Silverfish are small silver-colored insects which feed on starchy foods (among other things) and are found on moist surface. They thrive in badly ventilated areas and improving ventilation will help to control them.

Beetles are found in warm places and can also carry harmful germs place to place. Increase are destroyed by using an insecticide, and it is usual to employ people familiar with this work. The British Pest Control Association has a list of member companies.

3.1.2 Cats and Dogs

Domestic pests should not be permitted in kitchens or on food premises as they carry harmful bacteria on their coats and are not always clean in their habits. Cats also introduce fleas and should not be allowed to go in places where food is prepared.

3.1.3 Birds

Entry of birds through windows should prevented as food and surface on which fod is prepared may be contaminated by droppings.

3.1.4 Dust

Dust contains bacteria, therefore it should not allowed to settle on food or surface for food. Kitchen premises should be kept clean so that no dust can accumulate. Hands should be cleaned after handling dirty vegetables.

3.2 Washing Up

The correct cleaning of all equipment used for the serving and cooking of for is of vital importance to prevent multiplication of bacteria. This cleanings may be divided into the pan ash (plonge) or scullery the china wash-up.

3.2.1 Scullery

For the effective washing up of pots and other kitchen equipment the following method of work should be observed:

Pans should be scraped and all food particles placed in a bin.

Hot pans should be allowed to cool before being plunged into water.

Pans which have food stuck to them should be allowed to soak (pans used for starchy foods, such as porridge and potatoes, are best soaked in cold water.)

Frying-pans should be thoroughly wiped with a clean cloth; they should not be washed unless absolutely necessary.

Trays and tins used for pastry work should be thoroughly cleaned with a clean dry cloth, while warm.

Pots, pans and other equipment should be thoroughly cleaned with a stiff brush , steel wool or similar article, in hot detergent water.

Pan scrubbers are electrically driven with a hydraulic or flexible drive transmission.

Brush type heads can be varied to suit differing surface or types of soiling. Pan scrubbers can either be wall mounted near the pot wash or free standing mounted on mobile doilies to assist with equipment cleanings.

The washing-up water be changed frequently it must be kept both clean and hot.

The cleaned items should be rinsed in very hot clean water to sterilize.

Pans which have been sterilized (minimum temperature 77'C(171'F)) dry quickly if it has not been possible to rinse in very hot water should be dried with a clean cloth.

Equipment should be stored on clean racks, pans should be stacked upside down.

3.2.2 China Wash-Up

The washing up of crockery and cutlery may be by hand or machine.

3.2.3 Handwashing

Remove scraps from plates with a scraper of by hand.
Wash in water containing a detergent as hot as hands can bear (whether gloves are worm or not).

Place utensils in wire baskets and immerse them into waster bear thermostatically controlled at 77-82.C (171-180.F) for at least two minutes.

The hot utensil will air-dry without the use of a drying cloth.

Both the washing and sterilizing water must be kept clean and at the correct temperature

3.2.4 Machine Washing-Up

There are several type of machines which wash and sterilize crockery. In the more modern machines the detergent is automatically fed into the machine, which has continuous operation.
To be effective the temperature of the water must be high enough to kill any harmful bacteria and the article passing through the machine must be subjected to the water sufficient time to enable the detergent water to cleanse all the items thoroughly. the detergent used must be of the correct amount and strength to be effective. Alternatively low temperature equipment is available which sterilized by mean of a chemical, sodium hypo chlorite (bleach).
Where brushes are used they must be kept free from food particles.
Further information can be obtained from Lever Industrial, Lever House, St Jame's Road, Kingston-upon-Thames, Surrey KT1 2BA.
Student Assignment question: What is china wash up?

3.3 Hygienic Storage of Foods

One of the most important ways to prevent contamination of food is the correct storage of food. Foodstuff of all kinds should be kept in a refrigerated cold quickly. This can be done in several ways by divining large quantities of food into smaller containers; by cooling in a draught of air using fans or by raising the container and placing an article

underneath, for example, a triangle or weight, so that air can circulate; or by placing the container the outside cools but the center is still warm. When reheated the time taken to bring such a large quantity to the. Boil is sufficient to allow the bacteria to continue to multiply. if the food is not boiled long enough food poisoning can occur Particular care must be taken to store foods correctly in the warmer months; food not refrigerated in hot weather does not cool completely and, furthermore, flies and bluebottles are numerous in the summer months in the UK.

Following consultation in 1993, the Government has announced proposal which will considerably simplify food storage temperature. The main features of the new proposal are:
A general requirement to keep foods at temperature which will not result in a risk to health;

To store such foods at below $8^{O}C$ ($46^{o}F$); there will be exemption for food where chill control is not necessary;

Flexibility for certain food business to store at higher temperature where this can be justified by a safety assessment;

A hot holding requirement of at least $63^{o}C$ ($145^{o}F$) for food which could provide a risk to health; tolerances for limited period outside the chill and holding controls.
The main differences from the existing regulations are removal of the detailed list of foods subject to control. The two-tiered chill controls of $5^{o}C$ ($415^{o}F$) and $8^{o}C$ ($46^{o}F$) are replaced by the single $8^{o}C$ ($46^{o}F$) control. These relaxation places more responsibility on food business to be able to conduct effeteness risk analysis-proof of due diligence' become even more important.

These proposals came into effect in July 1995, so anyone considering changing their refrigeration equipment should bear these proposal in mind. The relevant Code of Practice should be issued in October.

3.4 Foods Requiring Special Attention

3.4.1 Meat

All made-up dishes, such as cottage pie, need extra care they must be very thoroughly cooked.

Reheated meat be well cooked (this is because pork may be affected by trichinosis, which is a diseases caused by a minute roundworm).

Poultry which is drawn in the kitchen should be cleaned carefully; boards, tables and knives must be thoroughly cleaned afterwards, otherwise there is a danger of contamination from excreta.
Meat should be handled as little as possible. Minced and cut-up meats are more likely t become contaminated because of infection from the food-handler. Boned and rolled joints require extra care in cooking as inside surface may have been contaminated sausages should be cooked right through. Tinned hams are lightly cooked, therefore they must be stored in a refrigerator.

3.4.2 Fish

Fish is usually washed, coked and eaten fresh and is not often a cause of food poisoning because they have been bred in water which has been polluted by sewage. They are today purified before being sold. All shellfish should be used fresh. If you buy alive, there is no doubt as to their freshness.

3.4.3 Eggs

Both hen's egg and ducks egg have caused food poisoning, and Department of Health guidance now suggest that it would be prudents to avoid eating raw eggs or uncooked foods made from them, such as home-made used right away, not left in this conditioned in a warm kitchen as they may have been contaminated in or after the processing. Bulk liquid egg undergoes pasteurization but may be contaminated after the container is opened. Hollandise sauce when is made with eggs is an example of a food which should not be kept in a warm kitchen for long. If not used in the morning it should be used in the evening.

3.4.4 Milk Dishes

When used in custard, trifles and pudding unless eaten soon after preparation. Milk should be treated with care. Two hours is the maximum for keeping them it should be discarded.

3.4.5 Watecress and Other Creen Salad

Watercress must be thoroughly washed as it grows in water which could be contaminated by animals All green salads and other foods eaten raw should well washed.

3.4.6 Synthetic Cream

Synthetic cream can be a cause of foods poisoning if allowed to remain in warm conditions for long periods. It is easily contaminated by

handling and from the air. particular care is required in the handling and holding at the correct temperature of soups and grives because bacteria multiply rapidly in these foods.

3.4.7 Reheated Foods

In the interest of economy a sound knowledge of handling left-over foods is necessary. Many tasty dishes can be prepared, but care must always be taken to st that foods thoroughly and carefully reheated. if care is not taken then food poising can result. Only sound should be used ('if in doubt, throw it out').

3.5 Food Hygiene Regulations

These regulations should be known and complied with by all people involved in the handling of food. A copy of the full regulations can be obtained from HMSO and an abstract can be obtained which gives the main points of the full regulations.
These points are as follow:

3.5.1 Equipment

This must be kept clean and in good condition.

3.5.2 Personal Requirements

All parts of the person liable to come into contact with food must be kept as clean as possible. All cuts and abrasion must be covered with a waterproof dressing spitting is forbidden.

Smoking is forbidden in a food room or where there is food.
As soon as a person is aware that he is suffering from or is a carrier of such infection as typhoid, paratyphoid, dysentery, salmonella or staphylococcal infections he must notify his employer, who must notify the Medical Office of Health.

3.5.3 Requirement for Food Premises

Toilets

These must be clean, well lighted and van tiled.
No food room shall contain or directly communicate with a toilet.
A notice requesting people to wash their hands after using the toilet must be displayed in a prominent place.
The ventilation of the drainage must not be in a food room.

The water supply to a food room and toilets is not permitted through an efficient flushing cistern.

3.5.4 Washing Facilities

Hand basin and an adequate supply of hot water must be provided.
Supplies of soap, nail-brushes and clean towel or warm air machines must be available by the hand basin.

3.5.5 Other Facilities

First Aid: bandages and waterproof dressing must be provided in a readily accessibly position.
Lockers: enough lockers must be available for outdoor clothes.
Lightning and ventilation: food rooms must be suitably lit and ventilated.
Sleeping room: rooms in which food is prepared must not be slept in. Sleeping rooms must not be adjacent to a food room.
Refuse: refuse must not allowed to accumulate in food room.
Buildings: the structure of food rooms must be kept in good repair to enable them to be cleaned and to prevent entry of rats, mice, etc.
Food storage temperatures.
Storage: food should not be placed in yard lower than 0.5 m (18 in) unless properly protected.

3.5.6 Penalties

Any person guilty of an offence shall be liable to a heavy fine and/or a term of imprisonment. Under latest Food Safety Act, unhygienic premises can be closed down by a local authority immediately, on the advice of the Environment Health Officer.
The Environment Health Officer when visiting premises will probably check for:
grease in ventilation ducts and on canopies;
long-standing dirt in less accessible areas;
cracked or chipped equipment;
province for staff toilets and clothing;
'now wash your hands' notice;
adequate and correct storage of foods (cooked food stored above raw food if there is not separate refrigerated provisions);
correct storage temperature of foodstuffs;
signs of pests and how they are prevented;
any hazards;
cleaning, training records and properly supervision.

3.5.7 Checklist for Catering Establishments

Entrances and exits unobstructed.
Fire doors undamaged and in operating position.
Escape routes clearly indicated.
Fire-fighting equipment visible and accessible.
Lighting god.

Self Assessment Exercise

Mention 2 of those things the Environmental officers would check while visiting Premises.

4.0 CONCLUSION

It is quite possible to recycle some waste materials for effective management of our refuse.

5.0 SUMMARY

This unit has examine and discussed control of waste and recyclable materials.

6.0 TUTOR-MARKED ASSIGNMENT

Mention 5 things the Environment Health Officers will probably check for when visiting premises.

7.0. REFERENCES/FURTHER READINGS

References and further theory of catering