ANALYZING THE APPLICATION OF FOOD SAFETY BASED ON THE HACCP SYSTEM IN THE FOOD RECEIVING AND STORING SECTION AT MELIA BALI VILLAS & SPA RESORT

By

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The Panel of Examiners declare that the thesis entitled “ANALYZING THE APPLICATION OF FOOD SAFETY BASED ON THE HACCP SYSTEM IN THE FOOD RECEIVING AND STORING SECTION AT MELIA BALI VILLAS & SPA RESORT” that was submitted by Verina Monica Suhendro majoring in Hotel and Tourism Management from the Faculty of Economics was assessed and approved to have passed the Oral Examinations on September 20th, 2010.

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DECLARATION OF ORIGINALITY

I declare that this thesis, entitled “ANALYZING THE APPLICATION OF FOOD SAFETY BASED ON THE HACCP SYSTEM IN THE FOOD RECEIVING AND STORING SECTION AT MELIA BALI VILLAS & SPA RESORT” is, to the best of my knowledge and belief, an original piece of work that has not been submitted, either in whole or in part, to another university to obtain a degree.

Cikarang, Indonesia, August 31st 2010

Verina Monica Suhendro
ABSTRACT

This research is made to analyze the application of food safety procedures based on the HACCP system applied at Melia Bali Villas & SPA Resort. Focusing in the receiving and storing section, this research is aimed to find out how effective is the implementation of food safety procedures in the receiving and storing section. Furthermore, through this research, major obstacles and critical problems that may cause the ineffectiveness are identified as one of the steps to overcome obstacles and improving effectiveness of food safety application based on the HACCP system.

This research study is focusing in the food receiving and storing sections which, according to the HACCP flow diagram, are take place in the first step of food production process. By using descriptive qualitative methodology, this thesis presents all information, data analysis, findings and recommendations in the form of comprehensive description and explanations.

For decades, the failure of effective food safety procedure implementation has become major issue in the food industry, especially in the food service business such as restaurant, café and hotels. The lack of information and trainings to the food handlers and management has made the business crews poor of proper knowledge and skills. This thing has become the most common cause of the ineffectiveness in the food safety procedures implementation. However, the proper HACCP plan and its appropriate implementation should be the best solution for this issue.
ACKNOWLEDGEMENT

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Regards,

Verina Monica Suhendro
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<td>BSN</td>
<td>Badan Standarisasi Nasional</td>
</tr>
<tr>
<td>CCP</td>
<td>Critical Control Point</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
</tr>
<tr>
<td>FIFO</td>
<td>First In - First Out</td>
</tr>
<tr>
<td>HACCP</td>
<td>Hazard Analysis and Critical Control Point</td>
</tr>
<tr>
<td>SNI</td>
<td>Standar Nasional Indonesia</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
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CHAPTER I
INTRODUCTION

1.1. Background of the Study

1.1.1. HACCP System and The Importance of Food Safety

Nowadays, food safety has become important matter to all parties involved in the food industry. In actual, the matter has been an issue since quite some time ago if we looked at the history of food regulation and safety. Through experience, a system which has proved to be very effective to be applied to the food industry was developed. This system is known as Hazards Analysis and Critical Control Point or more commonly known as HACCP.

The HACCP system was developed for the first time in 1960s by the Pillsburg Corporation with The United States Army and The United States National Aeronautics and Space Administration (NASA) to ensure the safety food for the first manned mission. Later on, the applications of the HACCP systems and its guidelines were defined by the Codex Alimentarius Commission in the Codex Alimentarius Code of Practice. This commission implements the United Nations Joint Food and Agriculture Organization (FAO) and World Health Organization (WHO) Food Standards Program.

HACCP has become synonymous with food safety. It is recognized worldwide as a systematic and preventive approach that confronts biological, chemical and physical hazards through anticipation and prevention, rather than through end-product inspection and testing.

Since food safety has become a worldwide issue, governments and independent organizations around the world are taking serious
consideration of this issue as it has become an essential element for the survival of mankind. These interesting facts has brought the writer to learn more and do the research on the application of food safety based on the HACCP system, specifically in the food receiving and storing section, at one of the world renown chain hotel, Melia Bali Villas & SPA Resort in Bali.

1.1.2. The Implementation of Food Safety Application and HACCP System in Indonesia

In Indonesia, the implementation of food safety standard and HACCP system is managed by the Badan Standarisasi Nasional (BSN) through Standar Nasional Indonesia (SNI) rules and regulations which is adopted from Recommended International Code of Practice-General Principles of Food Hygiene – Annex: Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for Its Application.

Even though there is a legal institution under the government’s authority, but the fact says that the implementation of food safety procedures in Indonesia has not meet the standard requirements yet. It is proved by some poisoning cases happened in Indonesia in these recent years, such as the one that happen in Surabaya in May 2004 which was caused by the consumption of fruit juice, the one that happen in one of big TV station company in Jakarta caused by the food that been supplied by catering service, and also the poisoning case of elementary students who consumed milk.

The following chart shows the percentage of food poisoning sources in Indonesia in 1997 to 2000 (Source: PPM & PL, 2002).
Figure 1.1. Percentage of Food Poisoning Source in Indonesia

As it is shown in the chart that the biggest source of food poisoning cases happen in Indonesia came from catering sector. For sure this happens because of the absence of the Quality Control Department and the low level of knowledge about the way of processing food and beverage safely, and also the lack of control toward the cleanliness of catering employees.

However, the weakness of the Indonesian Government quality control system in food safety standard has affected all sectors of food chain business including five stars hotels and restaurants.

1.1.3. The Implementation of Food Safety Application at Melia Bali Villas & SPA Resort

In Melia Bali Villas & SPA Resort itself, the implementation of food safety procedure is regulated in the Operating Manual Internal Control System of Sol Melia Hotels & Resorts. This document contains detail standard procedures of handling food in all stages started from the reception of goods to the service of foods. It also has the samples of record that should be had by food and beverage department in the purpose of measuring and controlling the critical points of hazard.
Although there is a standard operating manual, in fact, the implementation of food safety procedure is not fully carried out. This is proved by the presence of contamination and food poisoning cases happens in the field.

1.2. Company Profile

Located right by one of the most beautiful beach in Nusa Dua area is Sol Melia’s Asian flagship property, Melia Bali Villas & SPA Resort, just minutes to a major shopping center, The Bali Collection which also located in Bali Tourism Development Corporation area, also with easy access to many tourist attractions and places, and only 20 minutes to get to/from Ngurah Rai International Airport, Denpasar.

1.2.1. About Sol Melia

Throughout the almost 50 years of its history, Sol Meliá has been involved in a number of merger and acquisition operations with other hotel companies, allowing the company to grow at a startling rate and to double its portfolio in the last decade. After becoming the twelfth largest hotel company in the world and a point of reference in the international travel industry, the company has decided that time has come for a pause in growth to consolidate recent achievements.

Sol Melia Hotels & Resorts is the leading hotel group in Spain in both the city and resort hotel markets, the leading chain in Latin America and the Caribbean, the third largest hotel group in Europe and the tenth largest worldwide. The company is also the world's largest resort hotel chain. Sol Melia Hotels & Resorts has a portfolio of more than 350 city and resort hotels in 30 countries under the brand names of Melia Hotels, Sol hotels, TRYP Hotels and Paradisus resorts.
1.2.2. About Melia Bali Villas & SPA Resort

History
The Melia Bali Villas & Spa Resort is the first property of Sol Melia outside Spain, built on 26 acres of land in Nusa Dua, southern Bali. Its unique architecture was created by Mr. Emilio Nadal from Spain, who has dedicated a full year research and study of the Balinese architecture and lifestyle in Bali prior taking the assignment.

1985  July 19th  The soft opening of 500 rooms with the name Hotel Bali Sol. December 2nd  The grand opening by the former President of Republic Indonesia, Mr. Soeharto.

1996  The resort built 10 new garden villas, which designed for discriminating guests who demand privacy and attentive service in the finest accommodation. Secluded from the main hotel and surrounded by 100 m² lush gardens, the Garden Villas has its own bar and free flowing swimming pool.

1997  August 6th  Understanding the needs for not only holiday but also total rejuvenating for body, soul and mind, the resort launched Melia Bali Spa, boasted to provide traditional ingredients and recipes handed down from generations past, with professionally trained therapists. With these additional facilities, the resort changed the name into MELIA BALI VILLAS & SPA RESORT.

Services and Facilities

Rooms and Villas
Melia Bali Villas & SPA Resort has 484 rooms, consist of 117 Superior Rooms, 247 Deluxe Gardens, 50 Junior Suites, 20 The Levels, 40 Family Suites, 9 Deluxe suites and 1 Executive Suite,
and also 10 Private Garden Villas with private pool, sitting area and dining area, one big main pool and pool bar, individual music equipment, luxurious amenities, A la carte pillows and linens, private “Bale Bengong” on the beach, evening coffee/tea at Pool Bar, private breakfast and exclusive gift.

**Food and Beverage Services**

Melia Bali Villas & SPA Resort has five restaurants and four bars. Those are:

**Table 1.1. Melia Bali Villas & SPA Resort Restaurant and Bar Service**

<table>
<thead>
<tr>
<th>Venue Name</th>
<th>Type</th>
<th>Operating Hour</th>
<th>Capacity</th>
<th>Specialization</th>
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<tbody>
<tr>
<td>El Patio</td>
<td>Restaurant</td>
<td>24 hours</td>
<td>350 seats</td>
<td>Coffee Shop</td>
</tr>
<tr>
<td>Sorrento</td>
<td>Restaurant</td>
<td>7 to 11 p.m.</td>
<td>70 seats</td>
<td>Mediterranean Fine Dining</td>
</tr>
<tr>
<td>Sakura</td>
<td>Restaurant</td>
<td>7 to 11 p.m.</td>
<td>65 seats</td>
<td>Japanese Cuisine</td>
</tr>
<tr>
<td>Lotus Garden</td>
<td>Restaurant</td>
<td>7 to 11 p.m.</td>
<td>74 seats</td>
<td>Asian Cuisine</td>
</tr>
<tr>
<td>Sateria Beach</td>
<td>Restaurant</td>
<td>12 a.m. to 11 p.m.</td>
<td>126 seats</td>
<td>Seafood and Tapas</td>
</tr>
<tr>
<td>Lobby Lounge</td>
<td>Bar</td>
<td>10 a.m. to 1 a.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tapas Bar</td>
<td>Bar</td>
<td>10 a.m. to 12 p.m.</td>
<td></td>
<td></td>
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<tr>
<td>Jungle Bar</td>
<td>Bar</td>
<td>10 a.m. to 6 p.m.</td>
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<tr>
<td>Pool Villa Bar</td>
<td>Bar</td>
<td>10 a.m. to 6 p.m.</td>
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The other services provided by F&B Department are the room service and mini bar service. The room service provides variety of fresh food from starters to desserts. Mini bar service provides beverages and snacks provided in the mini refrigerator in the guest rooms.

Other facilities

Melia Bali Villas & SPA Resort also completed with other facilities such as:

- The Level Lounge
- Fitness center
- Bicycle rental and jogging track
- Business Center
- Transportation service
- Tour desk & travel offices
1.3. Problem Identified

Based on food microbiology examination reports issued by the Sanglah Hospital, Denpasar, on a variety of food and food ingredients at Melia Bali Kitchen, there were some food ingredients found to contain microbes. Those which were found to be contaminated are raw lamb and sausages, and type of microbes found in those foods is *Escherichia coli* (E. coli 0157) which is commonly found in raw meats. Furthermore, this issue becomes important because the presence of these pathogenic micro-organisms can be a threat to consumers safety. This matter then becomes interesting in the researcher’s point of view and finally this fact drove the researcher to do this research through observing the implementation of the food safety procedures based on the HACCP system in the receiving and storing sections.

1.4. Statement of the Problem

Effective implementation of food safety application based on HACCP system is one of the most important things for a food premise to be exist in the food and beverage industry. Standard operating procedures are made to be rightly followed to meet the highest standard of food safety for two most important reasons: first is for protecting consumer from harmful things and second is for preventing bad reputation of the business. However, since nothing is perfect in this world, sometime the procedure may contain mistakes, or else, some failures might happen in the implementation of the application for many reasons.

In this research, the application of food safety at Melia Bali Villas & SPA Resort is being analyzed, especially in the food receiving and storing section, to find out whether or not it has met the requirement of the standard operating procedures based on the HACCP system. Through the questionnaire, interview, observation and documentation, the implementation of the food safety application will be observed in order to point out some major obstacles and to recommend practicable solutions to minimize or address the ineffectiveness of the application implemented.
1.5. Research Objective

In general, the objective of this present study is to analyze the application of food safety at Melia Bali Villas & SPA Resort.

More specifically, the objectives of this research are:

- To analyze the application of food safety based on HACCP system in the receiving and storing sections at Melia Bali Villas & SPA Resort.

- To find out whether or not the implementation of food safety procedure in the receiving and storing sections at Melia Bali Villas & SPA Resort need improvement.

- To analyze the major obstacles in implementing the food safety application in receiving and storing sections effectively at Melia Bali Villas & SPA Resort.

- To find out critical problems as the effect of ineffective implementation of food safety application based on HACCP system in the receiving and storing section at Melia Bali Villas & SPA Resort.

- To assist further establishment of the most suitable food safety application based on HACCP system in the food receiving and storing section of Melia Bali Villas & SPA Resort.

1.6. Significance of the Study

The study is significant for three reasons:

First, for the hotel, the result of this study can be used to improve the effectiveness of food safety application implementation based on HACCP system in the food receiving and storing section.

Second, for the writer, this study will be very useful for her to improve knowledge about practical application of food safety based on HACCP system in the industry.
Third, for general readers, this study can be used as a reference for their research of HACCP study and to help realizing the importance and advantages of applying food safety based on HACCP system in the food and beverage industry.

1.7. Theoretical Framework

Ragin (1994) has seen social research as essentially a dialogue between ideas (theory) and evidence (data) constructing representation of social life. The model of social research by Ragin is then applied to the case being researched by the researcher. The elaboration of the model process of the research is provided below.
The theoretical perspective for the proposed study is most commonly referred to the relevant studies and literatures of Food Safety in the food and beverage industry.

The World Health Organization (2002), defined the food borne illness as diseases, usually either infectious or toxic in nature, caused by agents that enter the body through the ingestion of food.

The earliest step in ensuring the safety of food is to characterize the hazards. According to WHO (1995) the hazards characterization is a qualitative and quantitative evaluation of the nature of the adverse affects associated with biological, chemical and physical agents that may be present in foods.
After revealing the type of hazards through food hazards characterization, the next step is to apply the Hazards Analytical and Critical Control Points system as an approach which aims to assess the potential hazards in a food operation, decide which areas are critical to the safety of the consumer and devise ways to ensuring microbiological food safety. Then following the food product flow is the right step to be made because it is the most effective way to determine the Critical Control Points in the HACCP system.

The Hazards Analysis and Critical Control Points (HACCP) is an approach to food safety that is most likely to be preferred nowadays because it could provide the most effective and efficient way to ensure food products are safe. This system identifies, evaluates, and controls hazards which are significant to food safety. The HACCP system uses control of temperature, time, and specific factors that are essentials to prevent the food borne illness. The records produced in accordance about the HACCP system should provide a comprehensive source of information about the events that occurred in all stages of food production.

1.8. Scope and Limitation of the Study

This research observes and analyses the application of food safety standards based on HACCP system in Melia Bali Villas & SPA Resort. The scope of this research is limited on the implementation of food safety procedures in the receiving and storing sections specifically on the frozen goods category.

The observation and data collection were held on June 10\textsuperscript{th}-22\textsuperscript{nd}, 2010 in Melia Bali Villas & SPA Resort, Kawasan Wisata BTDC, Nusa Dua, Bali. All data collected and observation results were focused in the receiving and storing of frozen goods items.

For the reason of data limitation, time and researcher ability, the study is designed as a descriptive study. In this study the primary data is directly collected using organized observation in the receiving and storing sections, distribution of questionnaires and direct interview with staffs whose jobs are related to the observed object and some documentation on the related subjects.
in order to describe the facts of food safety application in the receiving and storing section of Melia Bali Villas & SPA Resort.

1.9. Definition of Terms

**Contamination** is the presence of the minor constituent in another chemical or mixture, often at the trace level.

**Corrective action** is action to be taken when the results of monitoring CCPs means a loss of control in the process.

**Critical control point (CCP)** is a point, step or procedure that can be controlled and in which a danger to food safety can be prevented, eliminated or reduce to acceptable levels.

**Danger** is a biological, chemical or physical agent present in the food, or the condition that is in, which could have a harmful effect on health.

**Date label** or **date mark** is a date on packaging indicating the period when food is safe and in the best condition to eat.

**Disinfection** is the process of reducing micro-organism and their spores to generally safe levels by the use of heat or chemical.

**First in first out (FIFO) rotation system** is an inventory costing method that also commonly used in the storing system, which assumes that the first items placed in inventory are the first sold or come out from stock.

**Flow diagram** is systematic representation of the sequence of phases or operations carried out in the production or preparation of a certain food.

**Food poisoning** is an illness caused by the consumption of food containing poisonous micro-organism or substances.

**Food handler** is anyone whose work involves food, or whose action or inaction could compromise the safety of food.
**Food safety** is the assurance that food will not caused harm to the consumer when it is prepared and/or eaten.

**Food safety procedure** is the procedure used in food handling process to assure that food will not caused harm to the consumers.

**Hazard** refers to any part of the food production chain that is not acceptable because it has the potential to cause a food safety problem. It can be microbial, chemical or physical property that will cause a product to be unsafe for consumption.

**Hazard Analysis and Critical Control Point (HACCP)** is a system designed to identify, assess and control significant dangers to food safety.

**Health marking** is sign of authorized health operational on the packaging indicating that the food has passed a food safety test conducted by government or other authority to ensure its safety to be consumed.

**High risk food** is ready-to-eat foods which are ideal for bacteria to live on.

**Perishable food** is food that spoils quickly.

**Receiving section** is the section where supplied goods arrived at the first time in the hotel area.

**Record** or **documentation** is a form that has documented data or observations recorded on it.

**Shelf life** is the safe storage period.

**Standard Operating Procedure (SOP)** is a set of written instruction that document routine or repetitive activity followed by an organization.

**Storing section** is the section where food items being kept temporary for future use.

**Temperature control** means maintaining food out of the danger zone temperature.
Workflow the route through food premises for food, food handlers and equipment during all stages from delivery of raw food and ingredients to dispatch, sale or service of finished products.
CHAPTER II
LITERATURE REVIEW

2.1. Food safety

2.1.1. Definition of Food Safety

According to the World Health Organization (1997), “Food safety is the assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use.”

Nash (1998, p.2) defined food safety as “the safeguarding, or protection, of food from anything that could harm consumers’ health.” More specifically, Satin (2008) defines food safety as a scientific discipline describing handling, preparation and storage of food in ways that prevent food-borne illness.

Ronald H. Schmidt and Gary E. Rodrick (2003, p.8) wrote “The scientific experts attending the 1998 American Academy of Microbiology Colloquium on Food Safety (AAM, 1999) described safe food as follows: Safe food, if properly handled at all steps of production through consumption, is reliably unlikely (i.e., the probability is low and the variability is small) to cause illness or injury.”

As Nash (1998, p.2) stated in his book, “Food safety involves safeguarding food from anything that could harm the health of consumers. While high standards enable everyone to enjoy their food without illness, injury or other problems, poor standards can lead to all kinds of harm – and even death.”
2.1.2. The Importance of Food Safety

WHO stated that “Food safety is an increasingly important public health issue. Governments all over the world are intensifying their efforts to improve food safety. These efforts are in response to an increasing number of food safety problems and rising consumer concerns.” As food safety is so important to everyone, Nash (1998, p.2) stated that food handlers have legal obligations for keeping food safe to eat.

Food handler is defined as someone who is involved in the preparation, cooking, serving or transportation of food in any part of the institution (New Castle University, 2009). These institutions are all organizations in the food chain. The Praxiom Research Group Limited (2008) stated that food chain consists of the entire sequence of stages and operation involved in the creation and consumption of food products. This includes every step from initial production to final consumption. More precisely, it includes the production, processing, distribution, storage and handling all of food and food ingredients.

2.2. Hazard Analysis and Critical Control Point (HACCP) System

2.2.1. Definition of HACCP

Hazards Analysis and Critical Control Points (HACCP) is a production control system for the food industry. It is a process used to determine the potential danger points in food production and to define a strict management and monitoring system to ensure safe foods products for consumers. HACCP is designed to prevent potential microbiological, chemical and physical hazards, rather than catch them. The system is used at all stages of food production and preparation processes including packaging, distribution, etc (United States Department of Agriculture, 2003).

Another source defines HACCP as “a scientific state-of-the-art food safety program originally for astronauts which takes a systematic and preventive approach to the conditions that are responsible for most food-borne illness. It
is preventive in nature; it attempts to anticipate how food safety problems are most likely to occur, and then it takes steps to prevent them from occurring.” (The Culinary Institute of America, 2002, p.67).

2.2.2. Seven Principles of HACCP

The heart of HACCP is contained in the following seven principles (WHO, 1997):

Principle #1: Conduct a hazard analysis

Principle #2: Determine the Critical Control Points (CCPs)

Principle #3: Establish critical limit(s)

Principle #4: Establish a system to monitor control of the CCP

Principle #5: Establish corrective actions to be taken when monitoring indicates that a particular CCP is not under control

Principle #6: Establish procedures for verification to confirm that the HACCP system is working effectively

Principle #7: Establish documentation concerning all procedures and records appropriate to these principles and their applications

2.2.3. Guidelines for the Application of HACCP System

For the HACCP system to be implemented properly and logically, suitable preparation and planning is required. It is vital for the managers in each food industry and in all departments to understand and are committed to HACCP initiatives. An HACCP plan and its pre-requisites or General Hygiene Plan are a series of documents that establish specific practices, resources and a sequence of activities in order to guarantee food safety (BIO 9000 Consultant, 2008).

The pre-requisites or General Hygiene Plans of an HACCP plan are essential for food safety and are complementary to and indispensable for the HACCP plan to be implemented effectively. The pre-requisite of an HACCP system
are defines as all necessary practices and conditions prior to and during the implementation of an HACCP plan, and which are essential for food safety. The initial pre-requisites are including staff training plan, premises, installation and equipment maintenance plan, cleaning and disinfectant plan, pest control plan, water supply plan, best practices in food production/handling plan, supplier traceability and control plan, and waste and waste water management plan (BIO 9000 Consultants, 2008).

For the final application of the HACCP system, the following logical sequence should be used (Codex Alimentarius Commission, 1969; BIO 9000 Consultants, 2008):

1. **Assemble HACCP team**
   The food operation should assure that the appropriate product specific knowledge expertise is available for the development of an effective HACCP Plan. Optimally, this may be accomplished by assembling multidisciplinary team. In the hotel, normally, it should consist of the head of each department involved in the process and also external technician who expert in the related field, in this case is health and HACCP experts. Its main responsibility is to monitor and control the food safety procedure to be implemented appropriately and accordingly as in the HACCP plan.

2. **Describe product**
   A full description of the product should be drawn up, including all relevant safety information. In hotel operation, this includes plans or diagrams of the installations and layout design of the whole premises, workflow plan of the food, and menu lists and recipe cards of all dishes.

3. **Identify intended use**
   The intended use should be based on the expected uses of the product by the end user or consumer. In specific cases, vulnerable groups of the population may have to be considered.

4. **Construct flow diagram**
   The flow diagram should be constructed by the HACCP team. The flow diagram should cover all steps in the operation of specific products. It is a
graphic depiction of the production process of the dishes provided, from
the arrival of the raw materials and ingredients through the service.

5. **On-site confirmation of flow diagram**
   The work team must verify how exact the flow diagram is by comparing
   with food preparation activities at all stages of the working day. If any
   errors are detected, the flow diagram should be modified accordingly.

6. **List all potential hazards associated with each step, conduct a hazard analysis, and consider any measures to control identified hazards**
   The HACCP team should list all of the hazards that may be reasonably
   expected to occur at each step according to the scope from primary
   production, processing, manufacture, and distribution until the point of
   consumption. The HACCP team should next conduct the hazards analysis
   to identify for the HACCP plan, which hazards are of such a nature that
   their elimination or reduction to acceptable levels is essential to the
   production of a safe food. Finally, HACCP team should describe the
   preventive measures that can be applied to control these hazards.

7. **Determine Critical Control Point (CCPs)**
   Identifying Critical Control Points (CCPs) is made easier by applying a
   sequence of decisions. The type and number of CCPs varies widely. The
   HACCP team, with the advice of the external technician, must determine
   where these CCPs are in each hotel.

8. **Establish critical limits for each CCP**
   Critical limit must be specified and validated for each Critical Control
   Point (CCP). The HACCP team should determine what these critical
   limits are.

9. **Establish a monitoring system for each CCP**
   Monitoring is the scheduled measurement or observation of a CCP relative
   to its critical limits. The procedures used for this process must be able to
   detect when a CCP is out of control.

10. **Establish corrective actions**
    Specific corrective actions must be developed for each CCP in the
    HACCP system in order to deal with deviations when they occur. The
    actions must ensure that the CCP has been brought under control. Actions
    taken must also include proper disposition of the affected product.
Deviation and product disposition procedures must be documented in the HACCP record keeping.

11. Establish verification procedures
The necessary procedures should be established to verify that the HACCP system works properly. Verification and auditing methods, procedures and tests, including random sampling and analysis can be use for this purpose. The frequency of verification should be sufficient to confirm that the HACCP system is working effectively. The hotel director is responsible for verifying the system.

12. Establish Documentation and Record Keeping
A monitoring system will be established for each CCP, which should be indicated in the appropriate records and corresponding control forms. Efficient and accurate record keeping is essential to the application of a HACCP system. Expertly developed HACCP guidance materials may also be utilized as a part of the documentation, provided that those materials reflect the specific food operation of the business. All of these records and documentation must be kept in specific folders and be always available for inspection for a period of at least two years, though this may be reduced by the competent authority.
2.3. Receiving and Storing of Food Products

“Food needs constant care until it is sold or served, including the time during delivery and storage. It is important to handle and store food in the best possible way – in the right conditions, at the correct temperature and for a safe length of time.” (Nash, 1998, p.27)

In general, the flow of food process in hotel operation can be divided into three main parts. Those parts are preparation, cooking, and serving. The preparation part consists of purchasing ingredients, receiving supplies, and all storing activities. While cooking is about the process of preparing food until it is ready to serve. Serving is when the ready-to-serve food is served to the guest. These stages are depicted in the below flowchart.
Based on the above chart, receiving and storage are take place mostly in the first steps of the food process. And as it is stated above that the food safety procedures have to be implemented in all stages of food processing, so it is also part of the receiving and storage section responsibilities to implement the safety procedures of food.
As it is mentioned in The Certified HACCP Auditor Handbook, food products must be handled in a safe and sanitary manner during the receipt and storage of raw materials and the storage and distribution of finished food products. Receiving, storage and shipping controls utilize numerous practices to prevent product contamination at the beginning and end of the food manufacturing process (Surak & Wilson, 2006, p.167).

An international standard issued by Codex Alimentarius Commission (1969, p.6) mentioned some basic rules in handling, storage and transport of food and food ingredients. Those are include sorting food and food ingredients to separate material which is evidently unfit for human consumption, disposing any of rejected material in a hygienic manner, and protecting food and food ingredients from contamination by pests, or by chemical, physical or microbiological contaminants during handling, storage and transport activities. There is also stated that care should be taken to prevent deterioration and spoilage through appropriate measures which may include controlling temperature, humidity, and/or other controls.

2.3.1. Receiving Food Products

Based on CAC/RCP 1-1969, Rev.4 – 2003 (Codex Alimentarius Commission, 1969, p.13), there is no raw material or ingredient should be accepted by an establishment if it is known to contain parasites, undesirable micro-organism, pesticides, veterinary drugs or toxic, decomposed or extraneous substances which would not be reduced to an acceptable level by normal sorting and/or processing. It is also obligatory to inspect and sort raw materials or ingredients before processing. Only suitable raw materials or ingredients should be used.

The Culinary Institute of America (2002, p. 63) stated some general rules in the reception process. First, make a habit of checking delivery trucks for signs of unsanitary conditions (e.g. dirt or pests). If the truck is a refrigerated or freezer unit, check the ambient temperature inside to see that it is adequate. Second, use a thermometer to check the temperature of the product as well. Third, check expiration dates. Fourth, verify that foods have the required
government inspection and certification stamps or tags. Fifth, randomly sample bulk items, as well as individual packages within cases. Sixth, rejects any goods that do not meet your standards. Once you have accepted a delivery, move the items immediately into proper storage conditions. And the last but not least, break down and discard cardboard boxes as soon as possible because they provide nesting areas for insects, especially cockroaches.

Another source stated that receiving controls include:

- Inspection of all incoming carriers for sanitary conditions;
- Inspection of all incoming ingredients for potential contamination;
- Proper documentation of all incoming raw materials and ingredients;
- Temperature evaluation of all incoming perishable raw materials; and
- Proper documentation of incoming product safety, such as certificate of analysis. (Surak & Wilson, 2006, p.167)

In the standard operating manual of Melia Bali Villas & SPA Resort itself, there are also some points of general regulations regarding the reception of raw material and ingredients (BIO 9000 Consultant, 2008, p.5-6).

1. Only duly approved and certified articles (whether they be foods and packaging, or cleaning and disinfectant products) will be admitted to reception. All should be supplied with the corresponding Health Record or Operational Health Authorization in the case of local providers based in the operative municipality of the hotel.

2. All foods must be correctly identified using appropriate labeling, which must indicate a sufficient useful life at the moment of reception and must all be correctly labeled with the “best before” or expiry date. For meat and meat products, fish and other perishables, these should be supplied with appropriate health markings.

3. Any canned and otherwise packaged goods that show knocks, dents, bulges or signs of corrosion must be rejected. Any vacuum-packaged products that are broken or torn must also be rejected.
4. All foods must be checked to ensure the absence of foreign bodies, such as metals, woods, insects or insect remains. Any foods with broken or dirty packaging, or with earth, must also be rejected.

5. Perishable foods must be checked to ensure the temperature upon reception, using a penetrating probe thermometer. This should be inserted into the food to reach as far into the middle as possible. A laser thermometer is also acceptable for this purpose, measuring the surface temperature of the food, but if any temperatures are recorded there are outside the established reception limits, the reading should be completed by measuring the temperature in the centre of the food item, using a penetrating probe thermometer.

   a. For perishable foods supplied in packaging, the thermometer probe must perforate said packaging (the probe must be disinfected prior to this operation, using the disinfectant towels supplied for this purpose). If for any reason this perforation were not possible (e.g. so as not to reduce the useful life of the food), the temperature must be taken using a laser thermometer on the surface of the item, or the thermometer probe should be inserted between two packages and a reading taken once the temperature has reached a constant level. This last operation should also be used when receiving frozen goods.

6. Once the food has been delivered and accepted by the Store Manager or Kitchen Manager, they should be taken to cold storage, for perishables, in no more than 15 minutes.

7. All deliveries received must be accompanied by the corresponding invoice and/or delivery note, indicating the nature of the delivery and the supplier’s details.

8. Transport conditions should be checked periodically to ensure that:

   a. The vehicle’s transport compartment is clean and free of waste.
   b. The compartment is free of pests or signs of pests.
   c. Perishable goods are transported in isothermal, chilled or refrigerated vehicles, and that the load reaches the hotel at the correct temperature.
   d. Foods are transported in food-grade packaging.
e. Foods are suitably stored in the compartment, avoiding any possibility of cross contamination. Checks must be made to ensure that the load is not excessive, with room for correct air circulation. Non-packaged or baled items must not be placed directly on the floor. When using the same vehicles to transport various foods, different food types must be correctly separated to avoid cross contamination. Food packaging or bales must be transported on clean trays or in clean boxes, and large meat items (half or quarter carcasses) must be checked to ensure that they are hanging from perfectly clean and well-maintained stainless steel hooks.

f. It is expressly forbidden to accept food transported at the same time as non-food and/or dangerous items, particularly chemical products. It is acceptable for the carrier to include foods from returns or with expired consumption dates, provided that they do not pose a danger of contaminating the rest of the goods.

g. The person unloading the delivery must wear clean clothing, and if said person must unavoidably cross working areas in kitchens or adjoining rooms, must wear a clean protective coat and is asked to observe good standards of personal hygiene.

Some documentation is used as a record of the receiving activities. The most important one is the Entry of Goods Record. This record is for the entry of goods received, which should include, as a minimum, the date of entry of the goods, the type of supply received, the supplier, number of delivery note or lot, amount and the hotel department that the supply is for. This record also includes the temperature of perishable goods obtained upon arrival. As a form of approval of the goods, and that they have been accepted, the person administering reception must sign the entry. (BIO 9000 Consultant, 2008, p.9)

2.3.2. Storing Food Products

Food products should be stored in a safe manner in clean areas with appropriate pest controls. Storage areas must be maintained in sanitary condition. This requires appropriate cleaning and pest control measures (Surak & Wilson, 2006, p.168).
Where necessary, adequate facilities for the storage of food, ingredients and non-food chemicals (e.g. cleaning materials, lubricants, fuels) should be provided. Where appropriate, food storage facilities should be designed and constructed to permit adequate maintenance and cleaning, avoid pest access and harborage, enable food to be effectively protected from contamination during storage, and to provide an environment which minimize the deterioration of food (e.g. by temperature and humidity control) (Codex Alimentarius Commission, 1969, p.10-11).

a. Types of Storage

Raw materials and ingredients should be stored in areas segregated from processing and packaging areas, and allergen-containing ingredients often are further segregated (Surak & Wilson, 2006, p.168).

Food store should be designed to conserve different types of food in the best possible way. According to Nash (1998, p.27), typical of storage areas include:

- Dry goods store for short and long-term storage of canned, bottled food, cereals, grains, tea, coffee and spices.
- Refrigerators and cold stores for storing high risk and perishable foods for short periods.
- Chiller cabinets and refrigerated vending machines for displaying food for very short periods.
- Freezers for keeping food for longer periods

Separate refrigerators for each of the categories; meat and poultry, fish and shellfish, eggs, dairy products and ready to serve products, is ideal, but if necessary, a single unit can be divided into sections. The front of the unit will be the warmest area, the back the coldest (The Culinary Institute of America, 2002, p.67).

b. General Rules for Safe Storage
Different foods have different storage requirements but there are some important general rules (Nash, 1998, p.28):

1. Store food immediately after delivery has been checked.
2. Deal with high risk, frozen and perishable foods before dry and canned goods.
3. Keep high risk and perishable foods out of the temperature danger zone.
4. Handle everything with care: rough handling can accelerate spoilage.
5. Place food in the appropriate storage areas, following any storage instructions on the label or box.
6. Protect food from contamination.
7. Store food off the floor (on shelves or pallets).
8. Use clean, dry containers and wrappers if food needs to be divided into smaller quantities or re-wrapped.
9. Stack shelves carefully without overloading; leave enough space between goods for air to circulate freely.
10. Keep storage areas clean and dry; clear up any spills immediately.
11. Check food regularly and always before you use it.
12. Rotate stock.
14. Separate any food that could be spoilt or has gone past its date mark and report it. Instruction will be given once the food has been checked: unacceptable food should be returned to the supplier or destroyed.
15. Store cleaning chemicals and materials in separate, clearly labeled areas.
16. The FIFO system should be practiced, and all containers should be labeled with date.

c. Storing Foods in Refrigerators and Freezers

After perishable foods have been delivered and accepted, they should be moved to cold storage at 41°F (5°C) as quickly as possible (Schmidt & Rodrick, 2003, p.466). More clearly, Melia Bali’s standard
operating procedures mention that all refrigerated and frozen foods must be stored within 15 minutes of reception (BIO 9000 Consultant, p.18).

There are also some other important points in the standard operating procedures of Melia Bali regarding the cold storage and freezers, such as:

1. All foods should be stored in such a way that eliminate cross contamination. To achieve this, they should be placed in separate cold stores according to the type of food. If storing raw and prepared foods in the same refrigerator is unavoidable (Day Fridge, cold service stations in kitchens), the following placement order for foods should be observed, from top shelf to bottom:
2. In freezers, raw and prepared products should be separated by grouping food types on different shelves.

3. Foods that are still hot must not be placed in freezers, to prevent temperature increases and possible condensation. If a product to be frozen, it should be done in the smallest amount possible to ensure speed in the freezing process, using a blast chiller, if available.

4. All stored food must be protected or placed in food-grade plastic containers with a hermetically sealed lid. Food-grade film may also be used to cover food, but must not be used with very fatty foods. Under no circumstance may waste bags, paper or cloths be used, even for freezing products.

5. Meats and fish that give off liquid must be placed on a strainer or perforated tray within the recipient, to prevent contact between the food and the liquid.

6. Any original supplier’s packaging placed in refrigerators must be suitably clean for this purpose. If the packaging needs to be changed, the food should then be re-labeled.

7. Avoid placing wood and cardboard in refrigerators. If for logistical purpose it is impossible not to use cardboard in cold storage, it
should always be placed on lower shelves and where all foods have the correct packaging.

8. Once metals cans been opened, if their content is not to be used immediately, it should be transferred to a suitable food-grade container.

9. Do not place foods or their containers on the floor, even when properly packed and baled. They should be placed on shelves at least 15 cm from the floor.

10. Utensils such as ladles, spoons, etc. must not be used inside storage recipients.

11. All prepared foods must be identified using labels indicating what the product is and the date on which it was prepared. Raw products (meats, fish, etc.) must be correctly identified with the label provided by the supplier. If the original packaging is discarded, the food in question must be labeled with the handling date.

12. The rules apply equally to refrigeration and freezing. For freezing products, the label should also contain the date of freezing.

13. A suitable product rotation procedure should be used, observing the “first in first out” principle (FIFO).

14. Observe and abide by best before and use-by dates. Observe and abide by the following secondary use-by dates for prepared foods:

   PREPARED FOODS: use within 72 hours
   CANNED MEATS AND VEGETABLES once opened: use within 72 hours

15. For dishes containing egg or egg products, the maximum duration is:

   FOODS WITH EGG OR EGG PRODUCTS: use within 24 hours

16. For prepared and vacuum-packed foods, the maximum duration is:

   FOODS WITH EGG OR EGG PRODUCTS: use within 24 hours

17. For correctly packed meats and fish received, the dates indicated by the manufacturer should be observed, but if this foods are removed from their packing, from that point on they must be stored in suitable recipients (in other cases they must be vacuum-packed) and the following expiry dates observed:
FRESH MEAT WITHOUT PACKING: prepare within 3 days (except for large pieces covered in fat, which must be aired until reaching desired maturation, e.g. rib eye steak)

FRESH FISH WITHOUT PACKING: prepare within 2 days

FRESH MEATS CUT AND RE-VACUUM PACKED: prepare within 15 days

FRESH MEATS FILLETED AND RE-VACUUM PACKED: prepare within 7 days

18. For freezing, as a general rule the useful life is:

FROZEN FOODS: use within 3 months

19. The rules on separating raw and prepared products, with the closed lid and the correct date on the label, applied not only to cold storage, but also to cold stations and reach-in fridges.

2.3.3. Temperature Control

According to Nash (1998, p.18), temperature control involves restricting the time that high risk foods are left at temperature danger zone and using high temperatures to kill pathogenic micro-organisms. The basic rules of good practice are restrict the time that high risks foods spend at danger zones temperature; keep cold food really cold (ideally at 5°C or cooler) and keep hot food really hot (at 63°C or hotter).

To keep food out of danger zone temperature, it is essential to (1) ensure that food is at safe temperature when it is arrived in the work place; (2) refrigerate raw, highly perishable and high risk foods immediately after delivery; (3) keep refrigerated food in storage until it is needed for preparation or serving; (4) cook food thoroughly; (5) serve hot food at 63C or hotter; (6) cool food as rapidly as possible so that food spends as short time as possible at danger zone temperatures; (7) thaw frozen goods in a refrigerator; and (8) reheat food adequately to kill most pathogenic micro-organisms (Nash, 1998, p.18).

Table 2.1. Recommended Temperatures and Temperature Check

<table>
<thead>
<tr>
<th>Stage of</th>
<th>When to check</th>
<th>Recommended safe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>handling</th>
<th>temperature</th>
<th>temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELIVERY</td>
<td>Every time perishable food is delivered</td>
<td>0˚C to 5˚C is ideal for refrigerated food.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-22˚C to -18˚C is ideal for frozen food.</td>
</tr>
<tr>
<td>STORAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerator or cold storage</td>
<td>Daily, at least.</td>
<td>0˚C to 5˚C.</td>
</tr>
<tr>
<td>Refrigerated storage counter or display</td>
<td>Daily, at least.</td>
<td>0˚C to 5˚C is ideal.</td>
</tr>
<tr>
<td>Deep freezer</td>
<td>Daily, at least.</td>
<td>-18˚C or below</td>
</tr>
</tbody>
</table>

Source: *Nash, 1998, p.19*

The chart above gives the temperatures that are generally accepted as good practice together with the recommended period of time involved where appropriate.

a. Temperatures at Reception

In contrary with Nash (1998), Schmidt & Rodrick (2003, p.463) stated that there is no temperature standards regarding the receiving of frozen food in the Food Code. They only mentioned that frozen food should be received frozen solid with no large crystals ice and/or freezer burn sign. Also a little bit different with the standard mentioned by Nash (1998) on the above chart, in Melia Bali’s standard operating procedure the temperatures at reception (with the exception of more restrictive legislation, should it exist) are regulated as follows:

**Table 2.2. Temperature at Reception**

<table>
<thead>
<tr>
<th>Type of product</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerated goods</td>
<td>0-7˚C</td>
</tr>
<tr>
<td>Frozen</td>
<td>≤-15˚C</td>
</tr>
</tbody>
</table>

*Source: BIO 9000 Consultant, 2008, p.5*
b. Temperature at Storage

In the Food Safety Handbook, it is written that safe storage temperature under the Food Code is 41°F (5°C) or below, and frozen food should remain solid while being stored in freezers (Schmidt & Rodrick, 2003, p.467-468). While based on Nash (1998)’s chart above, the temperature for the frozen foods best is -18°C or below.

In Melia Bali’s standard operating procedure, the temperature for the refrigerators and freezers as storage units are as shown in the below chart.

Table 2.3. Temperature at Storage

<table>
<thead>
<tr>
<th>Type of product</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerated goods</td>
<td>0-4°C</td>
</tr>
<tr>
<td>Frozen</td>
<td>≤ -18°C</td>
</tr>
</tbody>
</table>

*Source: BIO 9000 Consultant, 2008, p.18*

The temperature of refrigerated and frozen goods must be routinely monitored and kept recorded to prevent quality and food safety issues (Nash, 1998; Surak & Wilson, 2006). In accordance with it, Melia Bali’s standard operating procedure also states that these temperatures must be controlled at least once a day, at the beginning of the working day, and the results should be noted in the refrigerator temperatures control record (BIO 9000 Consultant, 2008, p.18).

2.3.4. Stock Rotation

Stock rotation involves using a product with the shortest shelf life before using a similar product with a longer shelf life (Nash, 1998, p.29).

Quality of products can deteriorate if items are not properly stored. For this cause, food must be rotated so that items in storage the longest will be used first. A standard approach to rotation is called First In, First Out (FIFO). This means the first item to go into storage is the first item to come out of storage. So, older products move to the front; new deliveries are placed behind them. This helps to ensure that stock is being rotated, and that products are not
expiring, spoiling, or suffering quality losses. Failure to follow a FIFO system can result in inventory loss. An outdated product will have to be discarded, which represent expensive food waste (Grossbauer, 2002, p.151).

2.4. Frozen Foods

In general, frozen food is defined as any article used for food or drink for man or other animals which is processed, which is packaged and preserved by freezing in accordance with good commercial practices and which is intended for sale in the frozen state. While the ready to eat frozen food means a frozen food product which has been factory processed to the point at which it is ready for use as a food, and may or may not require further heating before use (Connecticut Department of Consumer Protection, 1984).

As it has been mentioned in the temperature control subchapter above, in the United States frozen food is recommended to be kept in -18°C or colder, especially for some specific products e.g. ice cream and some snacks require -23°C or colder (Sørensen, 2002).

Based on the Melia Bali’s standard operating procedure, frozen goods (BIO 9000 Consultant, 2008):

- must be received at -15°C or colder;
- must not has been defrosted or refrozen; and
- must be stored within 15 minutes of reception.

In the term of storage, some rules and regulation applied based on the Melia Bali’s standard operating procedures (BIO 9000 Consultant, 2008):

- Frozen foods must be stored within 15 minutes of reception.
- Freezers should be kept at a temperature of at least -18°C.
- In freezers, raw and prepared products should be separated by grouping food types on different shelves.
- Foods that are still hot must not be placed in freezers, to prevent temperature increases and possible condensation. If a product is to be
frozen, it should be done in the smallest amount possible to ensure speed in the freezing process, using a blast chiller, if available.

- Frozen food must be identified using labels indicating what the product is and the date on which it was prepared and the date of freezing.
- As a general rule, the useful life of frozen food is within 3 (three) months.
3.1. Research Method

There are two common approaches in the process of analyzing data which are quantitative and qualitative analysis research. Quantitative research is a research involving the use of structured questions in which the response options have been predetermined and a large number of respondents are involved. While qualitative research is the process of collecting, analyzing, and interpreting data by observing what people do and say (Burns & Bush, 2002, p. 204).

Tourism as an object of observation is a social phenomenon with a wide range of scope including all aspect of human’s life in their recreation activities. As it is stated by Robert W. Mc Intosch and Charles R. Goeldner (1990, cited in Wardiyanta, 2006), tourism research is a systematic investigation, wholly and controlled toward the human life phenomenon in its relation to tourism activities. Refer to those statements, in doing this research the qualitative and descriptive research methodology is used as the most suitable research method in answering the social phenomenon especially in study case research.

3.1.1. Qualitative Research Analysis

In the Constructing Social Research: The Unity and Diversity of Method book (1994), Ragin has seen qualitative research as a strategy that is best suited for clarifying categories and concept when the best way to construct a proper research is through in-depth study. According to Ritchie & Lewis (2003) and Royse (1999) as cited in Arquisola (2009), the qualitative research examines, analyses and interprets observations for the purpose of discovering underlying meanings and patterns of relationships in a manner that does not involve mathematical models. It also provides explanation of
reasons and associations between social variables. In this type of analysis, the data is not in the form of numbers.

Regarding the process of the research Cooper and Schindler (2006, p.214) wrote “Qualitative research includes an “array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world.” In Ragin (1994, p.55)’s opinion, in the simplest terms, social research involves a dialogue between ideas and evidence. Ideas help social researchers make sense of evidence, and researchers use evidence to extend, revise and test ideas. The end result of this dialogue is a representation of social life.” The elaboration of the model process of the research by Ragin is depicted on the provided figure 3.1 below.

Figure 3.1. Simple Model of Social Research
Source: Ragin, 1994, p. 57

1. The dialogue between evidence and ideas
Evidence meant here is raw data collected from the field. On the other hand, ideas are pool of social theories to help make sense the evidence. So, as it is mentioned previously, ideas helps make sense of evidence, and evidence is to be used to extend, revise and test ideas.

2. **Analysis**

Analysis is the major part of the “dialogue”, basically it means breaking the phenomenon into their element parts and viewing them in relation to the whole they form. The analysis will lead to outset analytical framework deriving from theories and images which is synthesized from evidence. Once the image are put together based on all evidence, they may verify and improve an analytic frame or they may summon new ones.

3. **Representation of social life**

The end result of this “dialogue” will be a representation of social life which is defined as “evidence that has been shaped and reshaped by ideas, presented along with the thinking that guided the construction of the representation” (Ragin, 1994, p.55).

**3.1.2. Research Framework**

Based on the above model, a framework of research has been constructed for this particular research. This framework explains briefly about what will be the findings of the research.
As it is also mentioned previously in the introduction, the objective of this research is to analyze the application of food safety in the receiving and
storing, whether the implementation of the application has met the standard operating procedure based on the HACCP system or not. Based on that objective this research is focusing only in the receiving and storing section.

Stick on Ragin (1994)’s definition of qualitative research, to reach the objective of the research, a specific object in receiving and storing section at Melia Bali Villas & SPA Resort has been chosen. The object of this research is the food safety application on the receiving and storing of frozen goods. This object is chosen due to the following reasons:

1. Raw ingredients and materials are considered as the high risk food that can be the source of contamination and also contaminated easily.
2. Some microbial bacteria may survive even in deep freeze condition.
3. Improper handling of these kinds of ingredients and materials might lead to the contamination and even food poisoning, illness and/or disease cases.

3.1.3. Descriptive Research

This research is a descriptive research. Veal (1992) stated that descriptive research is very common in the leisure and tourism area. Descriptive study attempts to describe or define a subject, often by creating a profile of a group of problems, people, or events, through the collection of data and tabulation of frequencies on research elements or their interaction (Cooper & Schindler, 2006).

Descriptive research also assumes that the researcher has prior knowledge about the problem situation. In conclusion, descriptive research is a type of research that has as its major objective the description of something. The sole purpose of descriptive research is to describe a behavior or type of subject not to look for any specific relationships, nor to correlate two or more variables (www.li.suu.edu)

3.2. Research Instrument
Research instrument is defined as a testing device for measuring a given phenomenon, such as a paper and pencil test, a questionnaire, an interview, a research tool, or a set of guidelines for observation (www.thefreedictionary.com). In the qualitative research, Marshall & Rossman (2011, p.137) wrote that, the primary methods on gathering the information are: (1) participating in the setting, (2) observing directly, (3) interviewing in-depth, and (4) analyzing documents and material cultures.

3.2.1. Type of Data

Based on the source, collected data are differentiated into two categories: primary data comes from the primary source, while the secondary data are gathered from the secondary source. Cooper & Schindler (2006) defined the primary sources as original works of research or raw data without interpretation or pronouncement that represent an official opinion or position, while the secondary sources were defined as the interpretation on the primary data.

Primary Data

Primary data is the data that gathered from the primary source. In this research, primary data are gathered in the form of questionnaires, the feedback of interview, observation list and records or documentation of the company.

Secondary Data

The secondary data collected are included both raw data and published summaries, meanwhile the analysis for literature review is drawn mainly from health, public policy and legal literature regarding the safety standard of food in the process of receiving and storing frozen goods items.

3.2.2. Data Collection Methods
In this research, four tools are used in collecting the primary data. Those are:

**Questionnaires** – In this research, questionnaire is a tool used to find out the first indication of procedure implementation, whether it is implemented accordingly or not. Questionnaire was constructed based on food safety application and HACCP system principles, and the questions were made based on the food safety procedures written in the standard operating manual.

There are two kinds of questionnaire, questionnaire for receiving activities and questionnaire for storing activities. Each kind of questionnaire consists of two parts, the first part contains general questions including respondent profile and general knowledge about food safety and HACCP system and the second part contains questions related to receiving or storing activities.

Questionnaires were spread to respondents based on their responsibility. Those who are responsible in the receiving activities should fill the questionnaire for receiving activities, and those who responsible for storing should fill the storing activities questionnaire.

There are 20 respondents in total, they are hotel staffs whose works are related to the researched topic, which in this particular research are Receiving and Storing staffs and Kitchen staffs whose works are related to the receiving and storing activities. There are five persons in the Receiving and Storing section, consist of four staffs and one manager, who are responsible in both receiving and storing activities. While from the Kitchen department, receiving and storing activities are under responsible of some authorized persons such as Sous Chef and Chef de Partie. Total number of the authorized persons is 15, consist of 10 Sous Chef and five Chef de Partie. In short, there are 15 respondents for the receiving questionnaires and 10 respondents for the storing questionnaires.

Questionnaires were spread directly to the respondents on June 10th, 2010 and collected on June 12th, 2010.
Interview questions – Interview is aimed to get confirmation of the indication regarding the implementation of procedure. Interviews were done with the managers and supervisors regarding the implementation of the food safety standard in the selected field. Interview were done personally with Mr. Christian Beaulieu (Food & Beverage Director), Mr. I Gusti Ngurah Kanca (Executive Chef), Mr. Darmawan (Receiving & Storing Manager), Mr. Wayan Weca and Mr. Nyoman Suarnaya (Sous Chef).

Observation – Observation is conducted in the purpose of knowing the real action happens and to find the reality about the implementation of procedure and to get the validation of evidence of what being found through questionnaires.

The observation was done on June 12th, 2010 to June 22th, 2010 towards the daily activities of the receiving and storing section.

In this research, observation is divided into two parts, observation for the receiving activities and observation for the storing activities. For the receiving activities, observation was done daily on each received frozen good, observation starts at 8 a.m. to 2 p.m. everyday. While for storing section, daily check were done twice a day toward the freezers, in the morning around 10 a.m., and in the afternoon around 4 p.m.

Observation list is being used as a guideline to know about what to be observed. It was constructed based on the food safety application and HACCP system and each point was taken from the standard operating procedure used by Melia Bali.

Documentation – Documentation here means the company’s records related to the receiving and storing process, such as the temperature log, receipt and invoice, stock records, etc. Documentation is taken as supported evidence of the observation. These records are aimed to be the validation for the observation since company’s documentation is an authentic evidence of company’s activities.
The questionnaire, interview questions and observation lists used were constructed based on the standard operating procedure and the legal policy regarding the food safety matter.

3.2.3. Data Analysis Methods

Since this research is a qualitative descriptive research, all collected data will be analyzed and reported descriptively through tables, charts and brief explanation.

In doing the data analysis the Microsoft Excel is used as a statistical tool. This program is used in forming tables and charts and also in calculating some numerical data.

3.3. Sampling Design

Sampling is the process of selecting some elements from a population to represent that population. As it is mentioned by Cooper and Schindler (2006), the sample size for qualitative research vary by technique but are generally small.

3.3.1. Population

“A population is the total collection of elements about which we wish to make some inferences.” (Cooper & Schindler, 2006, p.434).

For the questionnaire, the population being used in this research is the hotel staffs. The population elements are the receiving and storing staffs and the kitchen staffs. While for the observation in the receiving area, the population is frozen goods item.

3.3.2. Sample Frame

Sample frame is the list of elements from which the sample is actually drawn (Cooper & Schindler, 2006). The sample frame of for the questionnaire is any one who is involved in the process of receiving and
storing frozen goods, which are the Receiving and Storing section staffs and Kitchen Managers and supervisors. Receiving and storing staffs are responsible in both receiving and storing activities of frozen goods. Kitchen managers are responsible in the receiving of perishable foods, while kitchen supervisors are responsible in the storing process of frozen goods.

As it is mentioned previously, observation is divided into receiving and storing activities. Sample frame for the receiving observation is frozen goods which is divided into five major categories: meat, poultry, processed meat, seafood and dairy products. For the storing section, sample frame are freezer units used to store frozen products.

### 3.3.3. Sample Technique

Cooper & Schindler (2006) said that the qualitative research involves non-probability sampling, where little attempt is made to generate a representative sample. In this research purposive and convenience sampling were used. Purposive sampling is used in questionnaire, while the convenience sampling is used in the observation. Purposive sampling starts with a purpose in mind and the sample is thus selected to include people of interest and exclude those who do not suit the purpose. Purposive sampling is chosen in order to get the most appropriate data from the people who are familiar and really involved in the receiving and storing activities. Convenience sampling is chosen for the observation with a consideration that every single observed object should be treated appropriately in accordance with the standard procedures.

### 3.4. Limitations

The scope of this research is limited on the implementation of food safety procedures in the receiving and storing section specifically on the frozen goods items. For this cause, the observation is only being done on the process of receiving and storing of frozen foods and ingredients.
Various limitations were found in writing the project report thesis. First, in Indonesia it was not easy to find the content of literature review on the researched topic, which is food safety based on the HACCP system. The available books or source in Indonesia could not give sufficient data or information to support this research since most of them do not give specific and detail information needed in this particular research. Second thing is about the time and distance, since the research was done in Bali, there are some difficulties in collecting the data from the source. The limitation in gathering the primary data which some of them is confidential also become one of the obstacle in doing this research.
CHAPTER IV
ANALYSIS OF DATA AND INTERPRETATION OF RESULT

There are four types of data collected in this research, those come from questionnaire, interview, observation and documentation. In this chapter, a full analysis of the all data gathered is presented.

4.1. Questionnaire and Observation Result

As it is mentioned in Chapter III, the questionnaire is aimed to find the first indication whether the receiving and storing procedure in Melia Bali Villas & SPA Resort is well implemented or not, while the observation is done to get confirmation whether what being stated in the questionnaires are right or not.

Questionnaires were spread to 20 respondents whose works are related to the receiving and storing activities. Respondents in this research are divided into two groups, those who are involved in the receiving activities and those who are involved in the storing activities. Receiving and storing staffs are involved both in receiving and storing activities, kitchen managers are involved more in the receiving activities, and kitchen staff whose responsible is more in the storing activities.

The results of the questionnaire and observation data analysis are presented below.
4.1.1. Respondents Profile

**Figure 4.1-1 Respondents’ Range of Age**

The above chart show the respondent profile. Based on the range of age, it is seen that majority respondents are between 46 to 55 years old.

**Figure 4.1-2 Respondents’ Job Position**

Based on the job position, respondents consist of Receiving and Storing Manager and staff, and Kitchen Managers and staffs. From the 20 respondents, there are five persons in the receiving and storing section which responsible in both receiving and storing section, 10 Kitchen Managers who
are responsible more in receiving activities, and five kitchen staffs whose responsible is more in the storing activities.

Figure 4.1-3 Respondents’ Working Period

The above chart shows the respondent working period with majority of them have been working in the current field for more than 20 years.

In conclusion, the majority respondents in this research are experienced hotel staffs that have been working in this particular field for more than 20 years.

4.1.2. General Questions about Hazard Analysis Critical Control Point (HACCP), Food Safety and Standard Operating Procedure at Melia Bali Villas & SPA Resort

These general questions are available both in the receiving and storing questionnaires. So the total number of respondents who answered these questions is 20.
The above figures show the respondent knowledge about the Hazard Analysis and Critical Control Point (HACCP) System and the food safety procedure. Both charts show that majority respondents know about the HACCP system and the food safety procedures.
Figure 4.1-6 Knowledge about Food Safety Procedure based on the HACCP System

Figure 4.1-6 shows how deep is the respondents’ knowledge of the food safety procedure based on the HACCP system. 80% respondents said that they know the food safety procedures based on the HACCP system.

Figure 4.1-7 Existence of Food Safety Standard Operating Procedure

Q6: Do you know about food safety procedure based on the HACCP system?

- Yes: 80%
- No: 15%
- Not really: 5%
- Blank: 0%

Q7: Is there any Standard Operating Procedure (SOP) regarding the safety of food in Melia Bali?

- Yes: 95%
- No: 5%
- Not sure: 0%
- Blank: 0%
Figure 4.1-8 Knowledge about Food Receiving and Storing Procedure in the SOP

Figure 4.1-7 and 4.1-8 talk about the presence of the Standard Operating Procedure of Melia Bali Villas & SPA Resort especially for the food receiving and storing activities. The charts show that most of respondents admitted the presence of the SOP and the specific regulation about receiving and storing of food product.

Figure 4.1-9 Socialization of SOP in Melia Bali Villas & SPA Resort

The last figure in this part is about the socialization of the SOP among the staff. The chart shows that majority respondents confess that the SOP has been socialized well among the staffs.
The above charts (Figure 4.1-4 to Figure 4.1-9) mean that the safety Standard Operating Procedure based on the HACCP system is exist in Melia Bali Villas & SPA Resort. This is proved by the presence of the Operating Manual Internal Control System for Sol Melia Hotels & Resorts which was constructed by BIO 9000 Consultant in 2008. Not only exist, but it also has been socialized well to the staffs so that the respondents have enough knowledge about the food safety, HACCP system and the Standard Operating Procedure.

4.1.3. Receiving Section

Respondents for receiving questionnaires and observation consist of five employees from receiving and storing section and 10 employees from kitchen department. So, there are 15 respondents in total.

Documentation

![Figure 4.1-10](image)

**Q10: Is there any requirement for the supplier (such as Health Record or Operational Health Authorization) when a food supplier would like to cooperate with Melia Bali in supplying food product?**

- Yes: 95%
- No: 0%
- Not sure: 0%
- Not sure: 0%
- Blank: 5%

**Figure 4.1-10 Respondents respond toward the availability of Health Record or Operational Health Authorization as a requirement for the food supplier**

As it is mentioned in the Operating Manual Internal Control System of Sol Melia Hotels & Resort that foods and packaging, or cleaning and disinfectant products should be supplied with a corresponding Health Record or Operational Health Authorization from Badan Pemeriksa Obat-obatan dan
Makanan Republik Indonesia and halal marking from Majelis Ulama Indonesia, the above chart come out with such a confirmation to it. It is shown above that 95% of respondents say that suppliers are required to have the Health Record or Operational Health Authorization accompanied their supplied products to the hotel. But based on the observation towards the respondents, which is shown in the chart below, there was none of them could show any sample of this document.

**Figure 4.1-11 Availability of Operational Health Authorization Record**

**Figure 4.1-12 Respondents respond toward the availability of Entry of Goods Record as documentation of the receiving activities**

Entry of Goods Record is a record for the entry of goods received. As it is mentioned in SOP, this record should be fulfilled as a documentation of the receiving activities. Based on the data gathered from the questionnaires, the
above chart shows that 65% of respondents admit that they should fill this record. But 20% of respondents say that they should not fill such record, the other 10% are not sure about it and the rest 5% do not answer the question.

**Figure 4.1-13 The use of Entry of Goods Record as documentation of the receiving activities**

Based on the observation of receiving activities done by respondents, there was none of them using Entry of Goods Record as documentation of the receiving activities.
Transport Vehicle Condition

Q12a: Do you check the availability of refrigerated compartment of the transport vehicles at the point reception?

Figure 4.1-14 Refrigerated compartment availability check

Q12b: Do you check the cleanliness of refrigerated compartment of the transport vehicles at the point of reception?

Figure 4.1-15 Cleanliness check of the refrigerated compartment
Figure 4.1-16 Temperature check of the refrigerated compartment

Q12c: Do you check the temperature of refrigerated compartment of the transport vehicles at the point of reception?

Figure 4.1-17 Shelving condition check of the refrigerated compartment

Q12d: Do you check the shelving condition of refrigerated compartment of the transport vehicles at the point of reception?
Q12e: Do you check the separation between food products and dangerous items in the refrigerated compartment of the transport vehicles at the point of reception?

- Yes: 95%
- No: 5%
- Blank: 0%

Figure 4.1-18 Separation between food and dangerous products check in the refrigerated compartment

Q12f: Do you check and make sure that the refrigerated compartment of the transport vehicles is free of sign of pest?

- Yes: 85%
- No: 15%
- Blank: 0%

Figure 4.1-19 Sign of pest check in the refrigerated compartment
The above charts present the data about transport vehicle checking procedure. As it is mentioned in the SOP, the transport condition should be checked periodically. It has to be clean and free of waste, free of pest and sign of pests, foods and dangerous items should be separated, and refrigerated compartment should be available in delivery of perishable goods. Based on the data gathered from the questionnaire, almost all respondents confess that they do all procedures in checking the transport vehicles as mentioned in the SOP and 75% respondents say that they would reject products if the compartment condition is not good and might cause contamination to the food.
Even the questionnaire result say that staffs do checking of vehicle’s compartment, but in fact, in the receiving activities observed, this procedure was not followed.

**Packaging and Labeling**

![Figure 4.1-22 Packaging check at the point of reception](image)

Q13: Do you check the packaging condition of each product at the point of reception?

- **Yes**: 90%
- **No**: 0%
- **Not always**: 10%
- **Blank**: 0%

![Figure 4.1-23 Product name label check at the point of reception](image)

Q14a: Do you check the availability of product name label on the packaging of product?

- **Yes**: 100%
- **No**: 0%
- **Blank**: 0%
Q14b: Do you check the availability of product specification label on the packaging of product?

0%

Yes □
No □
Blank □

100%

Figure 4.1-24 Product specification label check at the point of reception

Q14c: Do you check the availability of appropriate health marking label on the packaging of product?

0%

Yes □
No □
Blank □

95%

Figure 4.1-25 Appropriate health marking check at the point of reception

Q14d: Do you check the availability of expiry or "use-by" date label on the packaging of product?

0%

Yes □
No □
Blank □

100%
Packaging condition and the availability of product labels is one of the important things that have to be checked by the receiving clerk at the point of reception. In the Operating Manual Internal Control System of Sol Melia Hotels & Resorts, it is written that all foods must be correctly identified using appropriate labeling, which must indicate a sufficient useful life, and must all be correctly labeled with the “best before” or expiry date. Another point
mention about the standard packaging condition, it is written that any foods with broken or dirty packaging must be rejected.

Those charts above (Figure 4.1-22 to 4.1-28) present the result of data analysis on packaging condition and availability of certain labels from supplier. Those charts say that majority respondents agree that they do the check on the packaging and labeling of received products at the point of reception and they do rejection of product when the packaging and labeling condition do not meet the standard requirement.

![Packaging and Labeling Check](image)

**Figure 4.1-29 Packaging and labeling check**

From the result of observation towards receiving activities, there were only 53% of respondents do the checking toward the packaging condition and the availability of product specification label and expiry date label.

**Product Quality Check**
Q15: Do you check the quality of product at the point of reception?

![Pie Chart]

- Yes: 95%
- No: 5%
- Not always: 0%
- Blank: 0%

**Figure 4.1-30 Product quality check at the point of reception**

Q16a: What should you do if you find any sign of defrosting on the product at the point of reception?

![Pie Chart]

- Reject: 95%
- Accept: 5%
- Blank: 0%

**Figure 4.1-31 Action taken toward product that has sign of defrosting**
Figure 4.1-32 Action taken toward product that has sign of refreezing

Q16b: What should you do if you find any sign of refreezing on the product at the point of reception?

- Reject: 90%
- Accept: 5%
- Blank: 5%

Figure 4.1-33 Action taken toward product that has been expired

Q16c: What should you do if you find any expired product at the point of reception?

- Reject: 100%
- Accept: 0%
- Blank: 0%
Q16d: What should you do if you find any broken packaging of product at the point of reception?

- 95% Accept
- 5% Blank
- 0% Reject

Figure 4.1-34 Action taken toward product with broken packaging

Q16e: What should you do if you find any sign of discoloration on the product at the point of reception?

- 100% Accept
- 0% Blank
- 0% Reject

Figure 4.1-35 Action taken toward product with any sign of discoloration
In the Specific Specifications for Supplies part, in Melia Bali’s SOP, it is mentioned that frozen products must not have been defrosted and refrozen. There are some factors that indicate the poor conservation or irregularities in the cold chain such as frost, discoloration, noticeable softness to the touch and breaks or tears. For any of these signs that are found in the body of frozen goods, products should be rejected. Based on this procedure, questions have been asked to the respondents and the analysis of the answers is presented in the above charts. Majority respondents agree that they do check the quality of the products upon arrival and they reject any product with signs of spoilage on it. These answers were then confirmed through observation results which is shown in the below chart.
Figure 4.1-37 Product quality check upon reception of goods

Temperature Check

Q17: Do you check the temperature of frozen goods at the point of reception?

- Yes: 65%
- No: 20%
- Not always: 10%
- Blank: 5%

Figure 4.1-38 Temperature check upon arrival

Q18: What kind of thermometer is being used to check the temperature of frozen goods at the point of reception?

- Penetrating Probe Thermometer: 80%
- Laser Thermometer: 15%
- Blank: 5%
Q19: What would be the acceptable temperature for the frozen goods at the point of reception?

- ≤ -15°C: 65%
- > -15°C: 35%
- Blank: 0%

Figure 4.1-40 Acceptable temperatures of frozen goods upon arrival

Q20a: Do you clean and disinfect the thermometer before each using?

- Yes: 80%
- No: 20%
- Blank: 0%

Figure 4.1-41 Cleaning and disinfection of thermometer before use

Q20b: Do you clean and disinfect the thermometer after each using?

- Yes: 65%
- No: 30%
- Blank: 5%

Figure 4.1-42 Cleaning and disinfection of thermometer after use
The above charts present that majority respondents do the temperature check using the penetrating probe thermometer upon the arrival of frozen goods item. As it is mentioned in the SOP, the acceptable temperature for frozen goods at the point of reception is \( \leq -15^\circ C \). This is agreed by 65% of respondents as shown in figure 4.1-40. About the cleaning and disinfection of thermometer, SOP mentions that if penetrating probe thermometer is used, the probe of the thermometer has to be disinfected prior to temperature check. Figure 4.1-41 and 4.1-42 confirm this procedure, more than 50% respondents confess that they do clean and disinfect thermometer before and after use.

**Figure 4.1-43 Temperature check of frozen goods upon reception**

Observation result shows that there was none of respondent follows the temperature check procedure.
As it is mentioned in the SOP that perishable foods have to be taken to cold storage in no more than 15 minutes after it accepted. The above chart shows that majority respondents agree that they do deliver frozen goods to the freezer within 15 minutes after reception.

Observation result show that majority of respondents follow this procedure rightly.

Q22: Do you use clean and appropriate container when deliver received products to the store room?

Figure 4.1-44 Deliver received frozen goods within 15 minutes after reception

Figure 4.1-45 Delivery of product to the storage after reception

Figure 4.1-46 Deliver perishable foods to the storage using clean and appropriate container
One of the regulations in transporting food products is that food products must be transported on clean trays or clean boxes. Figure 4.1-46 show that 95% respondents confess that they implement this procedure.

![Image](image1.png)

**Figure 4.1-47 Deliver frozen goods to the storage using clean and appropriate containers**

Around 60% respondents followed this procedure rightly, they use clean and proper container to deliver frozen goods from reception area to storage.

![Image](image2.png)

**Figure 4.1-48 Applying FIFO rotation system while delivering received products to storage.**

Q23: Do you apply the FIFO rotation system when you deliver the received products to the store room?
Figure 4.1-49 Applying FIFO method when storing received foods in storage

Figure 4.1-48 show that 90% respondents implement the FIFO procedure when deliver food products to the storage as mentioned in SOP, but in fact, only 47% of respondents really apply the FIFO method in storing frozen goods, as shown in figure 4.1-49.

4.1.4. Storing Section

Respondents for storing questionnaires and observation consist of five employees from receiving and storing section and five employees from kitchen department. So, there are 10 respondents in total.
Figure 4.1-50 Knowledge about storing procedures

Based on the above chart, it is known that 85% respondents confess that they know about the storing procedures.

Labeling

Figure 4.1-51 Product name label on the stored products
Figure 4.1-52 Product specification label on the stored products

Q25b: Do you use product specification label for the stored products?

- Yes: 90%
- No: 5%
- Blank: 5%

Figure 4.1-53 Freezing date label on the stored products

Q25c: Do you use freezing date label for the stored products?

- Yes: 100%
- No: 0%
- Blank: 0%

Figure 4.1-54 “Best before” or expiry date label on the stored products

Q25d: Do you use expiry or “use-by” date label for the stored products?

- Yes: 100%
- No: 0%
- Blank: 0%
The use of labels in the stored items is aimed to make the products easier to be identified and to help in controlling the implementation of the FIFO rotation system. By label, products can be easily recognized and separated based on their classification or kind. In Melia Bali’s SOP, there is a procedure of putting label on stored products. There is mentioned that all prepared foods must be identified using labels indicating what the product is and the preparing date. For raw products original label provided by supplier should be available on the packaging of each product or, if the original packaging is discarded, the food must be labeled with the handling date. For freezing products, the label should also contain the date of freezing. Figure 4.1-51 to 4.1-54 above present the result of the questionnaire survey about the use of appropriate labeling on the stored products. The above charts show that almost all respondents confess that they do put correct labels on the stored item, but based on the observation result below, fact show that only 60% of respondents follow this procedure accordingly.

![The Use of Proper Labels](image)

Figure 4.1-55 The use of appropriate labeling as required in the SOP
Packaging and Container

**Figure 4.1-56 Appropriate protective packaging used for stored products**

Q26a: Do you use vacuum package/sealed/closed-lid/well-covered packaging for the stored products?

- Yes: 90%
- No: 5%
- Blank: 5%

**Figure 4.1-57 No wooden or cardboard container used for storing foods**

Q26b: Do you use no wooden or cardboard container for storing foods?

- Yes: 95%
- No: 5%
- Blank: 0%

**Figure 4.1-57 No wooden or cardboard container used for storing foods**

Q26c: Do you use clean packaging and container for storing foods?

- Yes: 100%
- No: 0%
- Blank: 0%
There are some points talking about the packaging and container condition that acceptable in the refrigerator or freezer store. The first mentions that stored foods must be protected or placed in food-grade plastic containers with a hermetically sealed lid. Next is about the cleanliness of the original packaging from the supplier which clean is a must. Then, wooden and cardboard container, paper and cloth packaging have to be avoided in refrigerator storing. Another point is about the use of perforated tray or strainer for any item that may give off liquid. And based on the questionnaire answer, the result is almost all of them agree that they do those procedures, as it is shown in the charts above.
Figure 4.1-60 The use of proper packaging style and containers in the storage

Shelving Condition

Q27a: Do you put stored items on the shelving at least 15cm off the floor?

0% 100%

Yes No Blank

Figure 4.1-61 Foods are being placed 15cm off the floor

Q27b: Do you separate raw and prepared food products in the storage?

0% 5% 95%

Yes No Blank

Figure 4.1-62 Separation between raw and prepared food products in the storage
The first rule about shelving condition in the freezer or refrigerator is not allowed to place food or their containers on the floor. They should be placed on shelves at least 15 cm off the floor. Another point mentions, in freezers, raw and prepared products should be separated by grouping food types on different shelves and/or the order should follow the Food Placement Plan standard. The above charts show the answer of respondents where most of them agree that they have done the correct procedures related to the shelving condition. Based on observation result, 8 of 10 respondents implement this procedure correctly.
Figure 4.1-64 The implementation of food placement plan standard in storage

Temperature Check

Q28a: Do you check the freezer temperature at least once a day?

- Yes: 95%
- No: 5%
- Blank: 0%

Figure 4.1-65 Daily temperature check

Q28b: Do you keep the freezer temperature at -18°C or colder at all time?

- Yes: 90%
- No: 5%
- Blank: 5%

Figure 4.1-66 Keeping freezer temperature under -18°C at all time
According to the general regulation of storing foods in refrigerator and freezer, the freezers should be kept at a temperature of at least -18°C to minimize the growth of micro-organism that can cause food poisoning and to minimize the possibility of deterioration of the food by frost burn. For this cause, Refrigerator Temperatures Control Record is provided as a record to control the consistency of freezer temperature. Based on these procedures, majority respondents say that they do check the freezer temperature and record it in the Temperature Log – Fridges & Freezers provided. But the observation result shows that, in fact, only 60% of respondents do these procedures accordingly.
About the rotation system, SOP state that a suitable product rotation procedure should be used, observing the “first in-first out” (FIFO) principle. In order to help this system running well, Melia Bali uses dating as a control. As it is mentioned in the Packaging and Labeling part above, one of the aims of putting labels on food products is to help controlling the implementation of the FIFO rotation system. Using label will make identification of products become easier, so staffs will recognize which product has to be used first, and which can stay longer in the storage.
Even though the questionnaire result shows that 95% of respondents implement the FIFO procedures, but the above chart shows that in fact only 60% of respondents do these procedures accordingly.

**Quality of Products**

**Q30a:** What will you do if you find a defrosting product in the storage?

- **95%** Keep
- **5%** Discard
- **0%** Blank

**4.1-72 Action taken toward defrost products found in the storage**
Q30b: What will you do if you find an expired product in the storage?

Figure 4.1-73 Action taken toward products with out of date shelf-life found in the storage

Q30c: What will you do if you find a product with broken packaging in the storage?

Figure 4.1-74 Action taken toward products with broken packaging found in the storage
Last questions are about the actions taken by respondents when they find any sign of unfitness of product in the storage. The regulation say that deteriorate products should be separated from fit products to avoid cross contamination. The above charts show that majority respondents choose to discard any product with any sign of unfitness condition.
Figure 4.1-77 Product quality check of the stored items in the storage
4.2. Interview Result

4.2.1. Interviewees Profile

Interviews were held with managers and supervisors in the purpose of getting confirmation to the result of questionnaire. For this research, interviews were conducted with Kitchen Executive Chef, Mr. I Gusti Ngurah Kanca and Food and Beverage Director, Mr. Christian Beaulieu, Receiving & Storing Manager, Mr. Darmawan, and two Kitchen Managers, Mr. Wayan Weca and Mr. Nyoman Suarnaya.

4.2.2. Hazard Analysis and Critical Control Point (HACCP), Food Safety and Standard Operating Procedure at Melia Bali Villas & SPA Resort

The first question was asking interviewees regarding the staffs’ knowledge about HACCP system and food safety procedure. Mr. Kanca replied that all kitchen staffs in Melia Bali know about the HACCP system and food safety procedure since they have a regular training program about HACCP and the food safety procedures. This answer is then confirmed by the other three interviewees. Mr. Darmawan, Mr. Weca and Mr. Suarnaya. They also state the same answer for this question. Mr. Suarnaya explained further about the training which usually held once a year by Human Resource Department cooperates with external technician named ECOLAB.

The availability of Standard Operating Procedure for kitchen operation was also being asked. Mr. Kanca admitted that Melia Bali has a Standard Operating Procedure for the whole hotel operation, including Food and Beverage Kitchen Department. The basic SOP is adopted from the central office of Sol Melia Hotels & Resorts in Spain. The document entitled Operating Manual Internal Control System which was constructed and last updated by BIO 9000 Consultant on December 2008. About the socialization of this standard procedure, Mr. Kanca and Mr. Weca admitted that they socialized these procedures to all staffs through the daily briefing that held twice a day. This thing was then be confirmed by Mr. Suarnaya who confessed that the managers socialize the operating procedure and always
remind the supervisors to share their knowledge and give ongoing training to their junior staffs.

4.2.3. Receiving Section

Get in to the receiving section, the first question is about the procedure of receiving food products. Mr. Darmawan, the Food Store Manager, explained briefly about the receiving procedure. First, receiving clerk must check the invoice or delivery note and make sure the product quantity and specifications are match with the purchase order from hotel. After that quality of the product must be checked. For perishable food products, Kitchen Manager should take the responsibility of checking the product quality upon arrival. In general, this explanation is in accordance with the SOP.

Mr. Suarnaya added that temperature of chilled and frozen products must also be check using a probe thermometer. According to the SOP, the acceptable temperature of frozen goods at the point of reception is -15°C or cooler. This statement is then confirmed by Mr. Kanca and Mr. Beaulieu (The Ex-Executive Chef). They explained that in the temperature higher than -15°C the water molecules inside the food product start moving. These moved can cause damage, for example inside the frozen meat products, water molecules stay between its flesh, when the temperature increase, the water molecule will start moving and those moves will leave scratches in the meat flesh which indicates that product is not fresh anymore.

Besides checking the quality and quantity of products, cleanliness of the transport vehicles and personal hygiene of the supplier should also be checked. Especially for perishable food, such as meat and poultry products, supplier is required to have some certification that certified their hygiene and sanitation standard of workplace, vehicles, all tools and equipment, and staffs. After passing all procedures, the product is then received or rejected. Once product is received, they will be directly classified into categories and brought into the appropriate store based on their classification.

4.2.4. Storing Section
Besides receiving procedure, Melia Bali also has storing procedure for food products. Based on the explanation from Mr. Kanca, food products are classified into their categories and kinds, and then be stored separately one to each other. For example, raw and prepared food products are not being kept in one place together or, when they have no more store room to keep them than they will arrange the foods on the shelves based on the Food Placement Plan standard. An additional explanation by Mr. Weca, to avoid cross contamination, all food products being kept in the refrigerator and freezer must be well package and covered, all containers being used has to be clean and in proper condition, and the store room itself have to be kept clean and neat.

About the temperature of freezer, Mr. Kanca said, as is it written in the SOP, that all freezers temperature have to be kept at -18˚C or cooler. When frozen foods are kept in -18˚C and in proper condition, the product can stay for 3 (three) months at most. To control the stability of the freezer temperature, there is a Temperature Log sheet being used to make records of daily temperature of freezer and refrigerator units. This sheet has to be filled up every 4 (four) hours by the in charge person in the certain area where the freezer unit is.

The last question for the storing section is about managing the implementation of “first in-first out” (FIFO) rotation method in the storing area. And the answer is by the dating. Mr. Weca said that dating is the most effective tool to control and manage the FIFO system. On the packaging of each stored item, staff should put preparing, storing or freezing date and also “best before” or expiry date so that products can be easily recognized whether it is old or new. Besides dating, Mr. Suarnaya said that inventory check at the end of each month is held in order to control the FIFO system implementation. Mr. Kanca added, separation of products also helps in controlling FIFO system. Separation of products will minimize the possibility of any product to be hidden under other kind of products in a container, so it will not left for a long time just because it was unseen. The last but not least, Mr. Kanca also admitted that he maintains the purchasing of products and arrange it to be
used within one week. So there will be no raw food product will stay for more than one week in the storage as long as everything works accordingly.

4.3. Documentation

In this research, documentation is used as supported evidence. Gathered document consists of copy of company’s records of receiving and storing activities that should be completed by person in charge during their duty time.

4.3.1. Receiving Section

Based on the standard operating procedure, there are some records used as evidence of receipt of goods. As record or documentation, receiving section should use invoice and/or delivery note from supplier and entry of goods records.

Invoice and/or Delivery Note

The most important one is the invoice or delivery note. The SOP mentioned that invoice or delivery note should clearly state the nature of the delivery and the supplier’s details. Besides used for payment transaction, this document is very important because it can be used to trace the history of product if any harmful thing happens.

Based on the observation, the presence of invoice or delivery note from suppliers was good. All supplies were accompanied by a clear and correct invoice or delivery note. Clear means the invoice or delivery note indicates the nature of delivery and supplier’s details. Correct means what is written on the invoice or delivery note is match with the supplies.

Entry of Goods Record

Another records should be used in the receiving section is the entry of good records. This record is for the entry of goods received. This entry should include the date of entry of the goods, the type of supply received, the supplier, number of delivery note or lot, amount and the hotel department that the supply is for. In receiving perishable goods, temperature upon arrival
should also be recorded in this record sheet. Last but not least, receiving clerk should put sign as a form of approval and reception of the goods.

Even this record is suggested by the SOP to be used in the receiving section, but could not find any of these sheets in the receiving area. Reception of goods in the receiving area is only based on the purchase order, once the goods is match with the request and the invoice states items and quantity correctly, goods are accepted. After goods being accepted, invoice is then bundled with the purchase order and be sent to Accounting Department. In brief, Melia Bali’s receiving section does not implement the use of Entry of Good Records sheet as documentation.

4.3.2. Storing Section

Since this research is focused in the freezer store, the record being collected is only the Temperature Control Record sheet. This is a record of freezer or refrigerator temperature which is used as a control in maintaining food at the correct temperature during storing period. The SOP states that this record must be completed on a daily basis and should be done at least once a day. In Melia Bali Temperature Log should be filled every four hours. It means that persons in charge should check the freezers temperature every four hours and record it in the provided sheet. In the implementation of this procedure, it was found that not all persons in charge do this appropriately. Some persons in charge do not really check the freezer temperature, but they just filled the sheet in accordance with the required standard.

4.4. Interpretation of Result

Based on the questionnaire and observation result, it is found that not all staffs who involved in the receiving and storing activities applied the proper procedures in receiving and storing of frozen goods. This means that the safety handling procedure is not fully implemented yet. Based on the interview result with the superior level staffs, this condition could be happen because lack of intensive trainings about the food safety and HACCP system, so there is lack of consciousness of the staffs toward the importance of food
safety. Beside that the socialization of SOP among the staffs and management is not really effective, so that both employees and management are not quite familiar with SOP. These causes were then triggered the occurrence of some critical problems such as:

**Improper Implementation of HACCP System**

Inadequate knowledge and skills of the employee and unavailability of SOP in each department office and section has made the HACCP system can not be implemented thoroughly. According to the Guidelines for The Application of The HACCP System, the effectiveness of HACCP system implementation will rely upon management and employees having appropriate HACCP knowledge and skills. In other words, adequate knowledge and skills are required to reach a thorough implementation of HACCP system. Since the SOP is not really available in each section and the training sessions could not give adequate information about the HACCP system, employees do not have enough skills and knowledge to implement the HACCP system thoroughly. Beside that, Department Head and Managers as the representative of management could not monitor and control the implementation of HACCP system because of the unavailability of SOP in their offices. This recent condition might have impact to the quality of food products and service that can lead to food poisoning cases.

**Habit of the Majority Employees**

Based on the questionnaire result more than 50% employees have been working in Melia Bali for more than 15 years. It means that most of them are not new comer in the field. Doing the same job in the long period of time ultimately makes the job become a habit. Once it became habit, it will need hard efforts and long time to be changed. This is what happening in Melia Bali.

**Absence of Strict Sanctions toward Violations**

Besides the procedure which has just being implemented, another problem that occurs is the absence of strict sanction toward violence practice of
procedure. Not only that, there is even no monitoring system of the implementation of procedure. It seems like they have no procedure to be followed and it has become a custom that everything just goes as it and everyone pretend nothing goes wrong. This could decrease employees’ awareness toward the danger that might occur as an effect of procedure failure.

**Inappropriate Layout Design**

Another change and renewal that might be needed to improve the service quality is changes in the physical appearance and layout of the building. As it is mentioned previously, the receiving area of Melia Bali is located next to the garbage room and it also serves as an employee entrance of the hotel. According to international principle codes of HACCP system application, and as it is confirmed by Mr. Beaulieu, the layout of receiving area to the storing and kitchen area at Melia Bali does not meet the standard requirements by HACCP system. It is supposed to be separated between the employee entrance and the supplies or deliveries entrance, and there must be a proper route of work flow where the food and foods supplies were not supposed to meet the garbage or other wastes in their ways. This condition may increase the possibility of cross contamination and even can bring loss to the business. This inappropriate condition has become one of the critical problems that occur in the implementation of food safety procedure.

**Other negative impacts that can be happen in the future**

Based on further analysis from various sources, there are some further impacts that may occur as the consequences of violation of the standard procedure. In receiving and storing section, the direct impact of improper handling of food item is the occurrence of contamination of food. For example, in the procedure of the packaging condition in the storage, food should be covered with correct packaging style and the package should be clean and free of waste that might endanger the food. The arrangement of food on the shelving also should be proper. Raw food especially ones that give off liquid should be put on the lower shelves than the ready to serve food, because one drop of
liquid from the raw product can cause contamination to the ready to serve food. If this thing is not promptly recognized and carried out corrective measures, this contamination can be a cause of food poisoning cases. For the safety of consumer is the priority, in the hotel business, the presence of food poisoning cases can lead to customer complaints and may also damage the good image of hotel.

Other impacts of poor food hygiene practices are loss of revenue, higher running costs, legal action and penalties from authorized department, redundancies and closure of the business.
CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

As consumers' safety is the most priority thing in food industry, food safety procedure has become a critical issue among the food service and food production operation. The HACCP system provides proper and hygienic ways in handling food to guarantee consumers’ safety. This system is then adopted by food industry as the highest standard in food handling system. Standard operating procedures of handling food were created based on HACCP principles and various efforts were made to achieve better implementation of procedure based on the standard requirements.

As one of five stars international chain hotel, Melia Bali is required to meet high standards in terms of consumer safety. In this case, Food and Beverage Department has become the most interesting department to be the object of research.

As research were done toward the application of food safety procedure based on the HACCP system on the receiving and storing of frozen goods, some findings have been found as a conclusion of this research study.

Based on the questionnaire and observation result, it is found that not all staffs who involved in the receiving and storing activities applied the proper procedures in receiving and storing of frozen goods. This means that the safety handling procedure is not fully implemented yet. Based on the interview result with the superior level staffs, this condition could be happen because lack of intensive trainings about the food safety and HACCP system, so there is lack of consciousness of the staffs toward the importance of food safety. Beside that the socialization of SOP among the staffs and management is not really effective, so that both employees and management are not quite familiar with SOP.

Some critical problems have occurred as the effect of the above causes, such as:
• **Improper implementation of HACCP system**
  
The effectiveness of HACCP system implementation relies upon management and employees having appropriate HACCP knowledge and skills. But since the SOP is not really available in each section and department, and the training sessions could not equip employees with adequate knowledge and skills about the HACCP system, employees become incapable to implement the HACCP system thoroughly as well as management could not monitor and control the implementation of HACCP system.

• **Habit of the employees**
  
As it has been explained in the previous chapter, majority employees who work in Melia Bali have been working in their current field for more than 15 years. This age is quite mature if it is compared to the implementation of the food safety procedure which has just been concerned in the last five years. The food safety procedure which was just implemented has not been able yet to change the working habits of the employees. This becomes one of the reasons why the implementation of food safety procedure in the receiving and storing section has not been effective yet.

• **The absence of strict sanctions toward violation of procedure**
  
Beside the working habits of the employees, another critical problem occurs as the effect of ineffective implementation of food safety procedure is the absence of strict sanctions toward violation of procedures. So far there is no firm action from the management against violations of the procedures as written in the SOP. This resulted in a lack of motivation for employees to obey the rules and worked in line with the applicable procedures.

• **Inappropriate layout design**
  
The third problem is the layout design of the receiving area which is not in accordance with the standard requirement based on the HACCP
system. The receiving area of Melia Bali is also served as employee entrance. It is also located next to the garbage room. In addition, the path through which the food supplies get into the kitchen area is the same path with the path which is passed by the workers into the hotel area, as well as the path for the disposal of garbage into the garbage room. So because of this improper condition, the implementation of food safety procedure became ineffective.

- **Other negative impacts in the future**
  
  Beside critical problems which are currently faced by management as the effect of failure in implementing the food safety procedure, ineffective implementation of the application can cause some other negative effects in the future. The closest effect is the occurrence of food poisoning cases that may endanger consumers. This case can lead to further impacts such as customers’ complaints, bad reputation of the company and loss of revenue, and even closure of the business by the legal authority.

5.2. **Recommendations**

5.2.1. **Recommendations for Melia Bali Villas & SPA Resort**

Knowing that the ineffectiveness of food safety application could endanger the existence of the business, corrective actions should be taken to solve problems and overcome the obstacles. For this cause, some recommendations are suggested to the management in order to improve the effectiveness in the implementation of these procedures.

**Staff Trainings and Socialization System of Standard Operating Procedure**

According to the Guidelines for The Application of The HACCP System, the effectiveness of HACCP system implementation will rely upon management and employees having appropriate HACCP knowledge and skills. For this cause, intensive ongoing training sessions are highly recommended to be
conducted in the purpose of equipping all levels employees and managers with adequate knowledge and skills about the food safety procedure based on the HACCP system. Besides intensive training, management should provide each department and section with copy of SOP and it should be put in an easy to seen place so that everyone involved in the operation could find it easily. This action is aimed to make all employees and managers get familiar with the SOP and expected can remind employees always to work in line with the standard procedure applied.

**Forming an HACCP Team**

As the first step in the Logic Sequence for Application of HACCP, the other recommendation suggested is to assemble HACCP Team. This team is responsible in the total implementation of the food safety application based on the HACCP system. Their tasks include making HACCP plan of operation, monitoring, controlling, reviewing, reporting and revising as needed the implementation of the system. This team is also responsible in solving problems that occurs in the operation, such as determining corrective measure toward critical control point, or taking corrective action toward procedure violation. This team is expected can help Melia Bali improving the effectiveness of HACCP system implementation.

**Implement well the Whole HACCP System based on the HACCP Seven Principles**

Another action that should be taken in order to improve the effectiveness of food safety application is by implementing the HACCP system thoroughly based on its seven basic principles. The HACCP Team should refer back to the Guidelines for the Application of the HACCP system and start to apply the system correctly. And in line with the thorough implementation of HACCP system, management should apply strict regulation in order to support the team in reaching the total effectiveness of food safety application.
Changing and Repairing of Premises and Equipment

Another action should be taken by management in supporting the effective implementation of food safety application is by providing adequate tools, equipments and facilities. For example some changes might be needed in the layout design of the receiving area in accordance with the standard requirement of premises according to the HACCP system. Proper utensils and equipment, such as thermometer and scales, should also be provided for a smooth and proper implementation of the application. This action is expected will reduce the number of violation towards procedures applied.

5.2.2. Recommendation for General Readers

For general readers, this paper is expected to add insight and knowledge. Through this thesis, the reader is expected can gain knowledge about the food safety, HACCP system, and application of food safety and proper procedure which is in accordance with the principles contained in the HACCP system. And finally, this research is expected can be used as a reference for further study or research on the implementation of food safety procedures based on HACCP system.
REFERENCES

Books


**Documents or Journals**


**Internet Sources**


My name is Verina Monica Suhendro. I am bachelor student of President University majoring in Hotel and Tourism Management. I am writing to invite you to participate in research in the form of a questionnaire.

My bachelor project is entitled “Analyzing The Application of Food Safety based on The HACCP System in the Receiving and Storing of Frozen Goods at Melia Bali Villas & SPA Resort”. Specifically it is focusing on the implemented policies and procedure in the food receiving and storing system.

The information supplied by participant will be treated as confidential.

Thanks for your cooperation and please feel free to contact me at verina_monica@yahoo.com in regards to any queries you may have.

Sincerely yours,

Verina Monica S.

**QUESTIONNAIRE**

1. In which range of ages are you?
   a. 20-35 years old
   b. 36-45 years old
   c. 46-55 years old

2. What is your position?
   a. Receiving and Storing Staff
   b. Receiving and Storing Manager
   c. Kitchen Staff
   d. Kitchen Manager

3. How long have you been working in the current position?
   a. Less than 2 years
   b. 2-10 years
   c. 10-20 years
   d. More than 20 years
4. Do you know about the HACCP system?  
   a. Yes  
   b. No  
   c. Not sure  

5. Do you know about food safety procedure?  
   a. Yes  
   b. No  
   c. Not sure  

6. Are you familiar with the food safety procedure based on the HACCP system?  
   a. Yes  
   b. No  
   c. Not sure  

7. Is there any Standard Operating Procedure (SOP) regarding the safety of food in Melia Bali?  
   a. Yes  
   b. No  
   c. Not sure  

(If your answer is “YES”, please continue to question No.8-9. If your answer is “NO”, skip question No.8-9)

8. In the SOP, is there any specific regulation about receiving and storing of food products?  
   a. Yes  
   b. No  
   c. Not sure  

9. Is the SOP being socialized well among the staffs?  
   a. Yes  
   b. No  
   c. Not really  

In the receiving section:  

10. Is there any requirement for the supplier (such as Health Record or Operational Health Authorization) if a food supplier would like to cooperate with Melia Bali in supplying food product?  
    a. Yes  
    b. No  
    c. Not sure  

11. Do you have to fill any form or record of goods entry as documentation for receiving activities?  
    a. Yes  
    b. No  
    c. Not sure  

12. Do you check the compartment of the transport vehicles at the point of reception of any frozen goods?  
    a. Availability of refrigerated compartment  
       Yes  
       No  
    b. Cleanliness  
       Yes  
       No  
    c. Temperature  
       Yes  
       No  
    d. Shelving  
       Yes  
       No  
    e. Separation with dangerous item (such as chemical, etc)  
       Yes  
       No  
    f. Sign of pest  
       Yes  
       No  
    g. What will you do with the product if the compartment condition does not meet the standard requirement? Reject / Accept  

13. Do you check the packaging condition of each product at the point of reception?  
    a. Yes  
    b. No  
    c. Not always  

14. Do you check the availability of labels in the packaging of products?  
    a. Product’s name  
       Yes  
       No  
    b. Specification  
       Yes  
       No  
    c. Appropriate health markings  
       Yes  
       No  
    d. Expiry or “use-by” date  
       Yes  
       No
e. Storing procedure

f. What will you do with the product if the packaging condition does not meet the standard requirement? Reject / Accept

15. Do you check the quality of product at the point of reception?
   a. Yes
   b. No
   c. Not always

16. In these conditions at the point of reception, what should you do with the products?
   a. Defrosting
   b. Sign of refreezing
   c. Expired
   d. Broken packaging
   e. Discoloration
   f. Not match with user specification

17. Do you check the temperature of frozen goods at the point of reception?
   a. Yes
   b. No
   c. Not always

   (If your answer is “YES”, please continue to question No.18-20. If your answer is “NO”, skip question No.18-20)

18. What kind of thermometer is being used to check the temperature of frozen goods at the point of reception?
   a. Penetrating probe thermometer
   b. Laser thermometer

19. What would be the acceptable temperature for the frozen goods at the point of reception?

20. Do you clean and disinfect the thermometer regularly?
   a. Before use
   b. After use

21. Do you store the frozen goods within 15 minutes after the receiving process?
   a. Yes
   b. No
   c. Not always

22. Do you use clean and appropriate container when deliver received products to the store room?
   a. Yes
   b. No
   c. Not always

23. Do you apply the FIFO rotation system when you deliver the received products to the store room?
   a. Yes
   b. No
   c. Not always

In the storing section:

24. Do you know the procedures of storing food?
   a. Yes
   b. No
   c. Not sure

25. Do you use appropriate labeling for the stored products?
   a. Product’s name
   b. Specification
   c. Freezing date
   d. Expiry or “use-by” date

26. Do you use appropriate packaging and container for the stored products?
   a. Vacuum package/sealed/closed lid/well-covered
   b. No wooden/cardboard container
c. Clean packaging and container  
   Yes  No

d. Strainer/perforated tray for products which give off liquid  
   Yes  No

27. Do you apply the appropriate shelving condition?
   a. At least 15cm off the floor  
      Yes  No
   b. Separation of raw and prepared products  
      Yes  No
   c. Arrangement is based on Food Placement Plan standard  
      Yes  No

28. Do you check the freezer temperature regularly?
   a. At least once a day  
      Yes  No
   b. Temperature should be kept at -18°C or cooler  
      Yes  No
   c. Fill up the Temperature Control Log  
      Yes  No

29. Do you check the implementation of the FIFO procedures?
   a. Put freezing date whenever store products  
      Yes  No
   b. Check the self-life date when issuing product  
      Yes  No

30. In these conditions at the point of storing, what should you do with the products?
   a. Defrosting  
      Keep / Discard
   b. Expired/Out of date  
      Keep / Discard
   c. Broken packaging  
      Keep / Discard
   d. Discoloration  
      Keep / Discard
   e. Frozen burn  
      Keep / Discard
THE INTERVIEW QUESTIONS
for
EXECUTIVE CHEF

1. How do you choose the suppliers?

2. Do you have any specific conditions in selecting suppliers regarding the needs for safe food?

3. If yes, what are the conditions?

4. Do the suppliers guarantee that their product is hygienic and safe?

5. Have you checked the safety and hygienic condition on their place and delivery?

6. How do the suppliers guarantee it?

7. What if there any spoiled foods?

8. Do your staffs know about HACCP?

9. Do you have the hygiene plan for the kitchen area?

10. If any, would you please let us know?

11. Are there any food safety training programs for the staff?

12. How do you control and manage the implementation of the rotation (FIFO) system in the receiving and storing of goods?
THE INTERVIEW QUESTIONS
for
STORE MANAGER AND AUTHORIZED KITCHEN MANAGERS

1. Do you know about the HACCP system?

2. Have you got a HACCP training program for receiving and storing goods?

3. Do you have any procedure while receiving products?

4. If yes, how is the procedure?

5. Do you separate each product after receiving the products from supplier?

6. What do you do with products that are not in a good condition?

7. Do you know where and how to store each product appropriately?

8. Do you know the recommended temperature to store each product?

9. How do you store the frozen foodstuff, such as frozen meat, poultry, ice creams and meat products?

10. How do you check and control the FIFO system in storing the goods?

11. How do you arrange food in the store to avoid cross contamination?
<table>
<thead>
<tr>
<th>No. (R)</th>
<th>Check Point</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Good</td>
</tr>
<tr>
<td>A</td>
<td><strong>DOCUMENTATION</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Availability of Health Record or Operational Health Authorisation</td>
<td>21</td>
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<tr>
<td>2</td>
<td>Availability of invoice and/or delivery note</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>Clearence of invoice or delivery notes indicating the nature of the delivery and the supplier's details</td>
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</tr>
<tr>
<td>4</td>
<td>Availability of Entry of Goods record</td>
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</tr>
<tr>
<td>5</td>
<td>Fulfillment of Entry of Goods record (complete and factual)</td>
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<tr>
<td>B</td>
<td><strong>TRANSPORTATION</strong></td>
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</tr>
<tr>
<td>1</td>
<td>Cleanliness of the vehicle's transport compartment</td>
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<td>2</td>
<td>Availability of refrigerated compartment in the transport vehicle</td>
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<tr>
<td>3</td>
<td>Temperature of vehicle's compartment</td>
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<td>4</td>
<td>Shelving condition inside the vehicle's compartment</td>
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<td>5</td>
<td>Food and non-food and/or dangerous items are not transported at the same time in the same compartment</td>
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<td>6</td>
<td>Appropriate packaging style used in the period of transportation</td>
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<td>7</td>
<td>Cleanliness of trays, boxes, hooks and/or other containers being used during the transportation</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Personal Hygiene standard of the food handlers (supplier)</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Product is being transported to the cold storage within 15 minutes after reception</td>
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</tr>
<tr>
<td>C</td>
<td><strong>PACKAGING</strong></td>
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<tr>
<td>1</td>
<td>Packaging condition at the point of reception (no breakage or damage)</td>
<td>31</td>
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<td>2</td>
<td>Cleanliness of the packaging at the point of reception</td>
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<td>3</td>
<td>Availability of specification of product label</td>
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<tr>
<td>4</td>
<td>Availability of appropriate health markings</td>
<td>20</td>
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<td>5</td>
<td>Availability of expiry date label</td>
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<td>D</td>
<td><strong>TEMPERATURE AND THERMOMETER</strong></td>
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<tr>
<td>1</td>
<td>Temperature check for frozen meat, poultry, seafoods and games at the point of reception (must be at -18°C or cooler)</td>
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<tr>
<td>2</td>
<td>Temperature check for another deep-freeze products and ice creams at the point of reception (must be at -18°C or cooler)</td>
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<tr>
<td>3</td>
<td>Thermometer condition</td>
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<td>4</td>
<td>Disinfection of thermometer before use</td>
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<tr>
<td>5</td>
<td>Cleaning the thermometer after use</td>
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</tr>
<tr>
<td>E</td>
<td><strong>CLEANLINESS OF AREA, CONTAINERS AND FOOD HANDLERS</strong></td>
<td></td>
</tr>
<tr>
<td>INSIDE THE HOTEL</td>
<td></td>
<td></td>
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<tr>
<td>--------------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 Cleanliness of the reception and transit area through to the storage area</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>2 Cleanliness of trays, boxes, hooks and/or other container being used in the internal transportation</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>3 Cleanliness of scales, thermometer and/or other tools or utensils being used during the process of reception</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>4 Personal hygiene standard of the food handlers (hotel staffs)</td>
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<table>
<thead>
<tr>
<th>F QUALITY OF PRODUCTS (VISUAL CHECK)</th>
<th>NO</th>
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<tbody>
<tr>
<td>1 Sign of defrosting or refreezing</td>
<td>22</td>
<td>15</td>
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<tr>
<td>2 Sign of discoloration</td>
<td>37</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>3 Sign of breakage or tears</td>
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<td>4 Sign of softness</td>
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<td>No. (S)</td>
<td>Check Point</td>
<td>Answer</td>
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<td>------------------------------------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good</td>
<td></td>
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<td>A</td>
<td><strong>DOCUMENTATION</strong></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>Availability of Refrigerator Temperatures Control Record</td>
<td>18</td>
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</tr>
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<td>2</td>
<td>Fulfillment of Refrigerator Temperatures Control Record (complete, factual, timely manner)</td>
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<tr>
<td>B</td>
<td><strong>SHELVING</strong></td>
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<td></td>
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<tr>
<td>1</td>
<td>All foods are being placed on the shelving at least 15cm off the floor</td>
<td>10</td>
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<tr>
<td>2</td>
<td>Goods are to be arranged on the shelves based on the Food Placement Plan standard</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Separation of raw and prepared products</td>
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<td></td>
</tr>
<tr>
<td>C</td>
<td><strong>PACKAGING AND LABELING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Packaging protection of the stored items (covering, closed lid, sealed, well packaging, etc)</td>
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<td></td>
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<tr>
<td>2</td>
<td>Cleanliness of the original packaging from the supplier</td>
<td>18</td>
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</tr>
<tr>
<td>3</td>
<td>The absence of wooden and/or cardboard in the freezer</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Strainer or perforated tray for meat or fish that give off liquid</td>
<td>0</td>
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<tr>
<td>5</td>
<td>Availability of products information or specification label</td>
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</tr>
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<td>6</td>
<td>Availability of expiry date label</td>
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<tr>
<td>7</td>
<td>Availability of freezing date label</td>
<td>4</td>
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<tr>
<td>D</td>
<td><strong>ROTATION SYSTEM</strong></td>
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<td></td>
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<tr>
<td>1</td>
<td>Implementation of FIFO system in the freezer units</td>
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<tr>
<td>2</td>
<td>FIFO system check at the point of storing products</td>
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</tr>
<tr>
<td>3</td>
<td>FIFO system check at the point of issuing products</td>
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</tr>
<tr>
<td>4</td>
<td>Periodically FIFO system check</td>
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<tr>
<td>E</td>
<td><strong>TIME AND TEMPERATURE CONTROL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Keep deep-frozen products at temperature lower than -18°C</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Keep frozen foods no longer than 3 months</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Daily freezer and refrigerator temperature check</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td><strong>CLEANLINESS OF AREA, CONTAINERS AND FOOD HANDLERS INSIDE THE HOTEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Cleanliness of the freezer unit area</td>
<td>4</td>
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</tr>
<tr>
<td>2</td>
<td>Cleanliness of the air conditioner unit inside the freezer</td>
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</tr>
<tr>
<td>3</td>
<td>Cleanliness of trays, boxes, hooks and/or other container being used in the storing process</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Cleanliness of scales, thermometer and/or other tools or utensils being used for measurement activities</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The absence of utensils (ladles, spoons, etc) inside the freezer</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Personal hygiene standard of the food handlers (hotel staffs)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
1. RECEPTION OF GOODS AND SUPPLIER CONTROL

Form: 1  
Version: 05/07  
Standard: Reception of Goods and Supplier Control  
Responsible: STORE MANAGER, KITCHEN MANAGER AND ASSISTANT KITCHEN MANAGER

General regulations:

- Only duly approved and certified articles (whether they be foods and packaging, or cleaning and disinfectant products) will be admitted to reception. All should be supplied with a corresponding Health Record or Operational Health Authorisation in the case of local providers based in the operative municipality of the hotel.

- The reception and transit area through to the storage area must be in an appropriate state of cleanliness, and no waste or other utensils that could produce a source of contamination may be stored in these areas.

- All foods must be correctly identified using appropriate labelling, which must indicate a sufficient useful life at the moment of reception, and must all be correctly labelled with the "best before" or expiry date. For meat and meat products, fish and other perishables, these should be supplied with appropriate health markings. Specific conditions for each type of food received are indicated elsewhere in this document (see Appendix).

- Any canned and otherwise packaged goods that show knocks, dents, bulges or signs of corrosion must be rejected. Any vacuum-packed products that are broken or torn must also be rejected.

- All foods must be checked to ensure the absence of foreign bodies, such as metals, wood, insects or insect remains. Any foods with broken or dirty packaging, or with earth, must also be rejected.

- Perishable foods must be checked to ensure the temperature upon reception, using a penetrating probe thermometer. This should be inserted into the food to reach as far into the middle as possible. A laser thermometer is also acceptable for this purpose, measuring the surface temperature of the food, but if any temperatures are recorded that are outside the established reception limits, the reading should be completed by measuring the temperature in the centre of the food item, using a penetrating probe thermometer.

  - For perishable foods supplied in packaging, the thermometer probe must perforate said packaging (the probe must be disinfected prior to this operation, using disinfectant towels supplied for this purpose). If for any reason this perforation were not possible (e.g. so as not to reduce the useful life of the food), the temperature must be taken using a laser thermometer on the surface of the item, or the thermometer probe should be inserted between two packages and a reading taken once the temperature has reached a constant level. This last operation should also be used when receiving frozen goods.

- Temperatures at reception (with the exception of more restrictive legislation, should it exist) must be as follows:

<table>
<thead>
<tr>
<th>Type of product</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerated goods</td>
<td>0-7°C</td>
</tr>
<tr>
<td>Frozen</td>
<td>≤ -15°C</td>
</tr>
</tbody>
</table>

In the event of conflict with the temperature indications on the manufacturer's packaging, these latter figures should prevail.
Once the food has been delivered and accepted by the Store Manager or Kitchen Manager, they should be taken to cold storage, for perishables, in no more than 15 minutes.

All deliveries received must be accompanied by the corresponding invoice and/or delivery note, indicating the nature of the delivery and the supplier's details.

Transport conditions should be checked periodically to ensure that:

- The vehicle's transport compartment is clean and free of waste.
- The compartment is free of pests or signs of pests.
- Perishable goods are transported in isothermal, chilled or refrigerated vehicles, and that the load reaches the hotel at the correct temperature.
- Foods are transported in food-grade packaging.
- Foods are suitably stored in the compartment, avoiding any possibility of cross contamination. Checks must be made to ensure that the load is not excessive, with room for correct air circulation. Non-packaged or baled items must not be placed directly on the floor. When using the same vehicle to transport various foods, different food types must be correctly separated to avoid cross contamination. Food packaging or bales must be transported on clean trays or in clean boxes, and large meat items (half or quarter carcasses) must be checked to ensure that they are hanging from perfectly clean and well-maintained stainless steel hooks.
- It is expressly forbidden to accept foods transported at the same time as non-food and/or dangerous items, particularly chemical products. It is acceptable for the carrier to include foods from returns or with expired consumption dates, provided that they do not pose a danger of contaminating the rest of the goods.
- The person unloading the delivery must wear clean clothing, and if said person must unavoidably cross working areas in kitchens or adjoining rooms, must wear a clean protective coat and is asked to observe good standards of personal hygiene.

Dangers:

1. Foods can be contaminated by transportation in vehicles that do not meet appropriate levels of hygiene.

2. The micro-organisms in foods can multiply because of transportation at temperatures above the established norms (CCP 1), or because of excessive time between unloading and being placed in cold storage.

3. Foods can be supplied contaminated at source due to hygiene shortcomings in the supplier's or producer's facilities (toxic substances, foreign bodies, chemical waste, broken or deteriorated food packaging, unsuitable useful life dates, etc.).

4. Food contamination through lack of hygiene diligence by the carrier.

5. Food contamination through lack of hygiene in the reception area and/or trolleys and scales.

6. Purchasing items from suppliers not certified by the hotel or appropriate central office.

Preventive measures:

For danger 1:
Transport vehicle and conditions of hygiene and cleanliness. Ensure that the vehicle is appropriate: refrigerated for perishables, and at least isothermal for fruit and vegetables. Controlled interior temperature in the vehicle, by means of exterior thermometer.

For danger 2 (CCP 2):

- Check the interior temperature of the food using a penetrating probe or on the surface using a laser thermometer.
- For supplies made up of several units, random samples must be taken from a sufficient quantity.
- Ensure that foods requiring refrigeration are quickly placed into cold storage (15 minutes maximum). During this time, foods must not be left on the floor, but should be kept on shelves or suitable work surfaces.

For danger 3:

- Make a visual inspection of the outward appearance of the food, checking whether the packaging is intact or is broken or crushed, or contains foreign bodies or signs of defrosting. Check the degree of freshness of perishable foods (see Supplies Specifications Appendix).
- Systematic visual check that all food is correctly labelled, with particular emphasis to ensure that best before dates are adequate. Each hotel must list the articles that it normally takes delivery of, grouped by families, and must establish the minimum expiry and best before dates for products upon arrival at the hotel, to ensure that these dates are sufficient according to stock rotation, so as to minimise the possibility and frequency of stock expiring its useful life in the hotel.
- For supplies made up of several units, random samples must be taken from a sufficient quantity.
- Only purchase articles certified by the hotel or the respective central purchasing office.

For danger 4:

- Inspect the carrier's cabin while unloading to ensure that hands and uniform are clean.

For danger 5:

- Visually inspect goods reception areas and areas of food transit to ensure that they are free of waste or any other element that could be a source of contamination, and ensure that trolleys and scales are clean and well maintained.

For danger 6:

- Only purchase articles certified by the hotel or the respective central purchasing office.
- Ensure that the supplier provides an invoice/delivery note for all supplies.

**Monitoring:**

To monitor for danger 2 (CCP 1): Inspect the temperature of the perishable food item upon each reception.

**Corrective measure:**
For danger 1:

- Reject any article that has been transported using a vehicle in a deficient state of cleanliness or at the same time as non-food or dangerous goods such as chemical products.

For danger 2 (CCP 1):

- Reject foods with temperatures outside the stipulated limits.

- Any food that exceeds the 15-minute margin from unloading to storage must be immediately transferred to cold storage and must not be used until it reaches the established limit. Any lapse of more than 1 hour must be noted in the Goods Reception Record and Management must be notified, so that the appropriate measures are taken.

For danger 3:

- Reject foods showing signs of infestation by pests, that are not properly labelled, or with expired useful life dates, dirty or deteriorated packaging with signs of bulging, rust or excessive knocks.

- Reject any goods from a non-certified supplier.

For danger 4:

- Should any carriers display a lack of personal hygiene, they must be asked to wash their hands and/or change their protective clothing. If this is not possible, the good must be unloaded by appropriately uniformed hotel staff. The supplier warning protocol must also be initiated.

For danger 5:

- Clean the area of waste and any other possible source of dirt, and inform the chambers department to clean the area.

For danger 6:

- Reject any goods from a non-certified supplier.

- Reject any supplies that are not delivered with an invoice or delivery note, or which are incomplete (lack of supplier’s details, supply description, etc.).

- If for any reason it were not possible to return foods to the supplier at the time of reception, they should be placed on a specific storage shelf previously designated for this purpose, which must be identified with a label stating "Non-approved product". Perishables must be placed in the appropriate cold storage, separated from other foods, and be labelled "Non-approved product. To be returned."

**WARNING TO SUPPLIERS**

The detection of any anomaly from those listed will be cause for a warning to be issued to the supplier, whatever the corrective measure may be.

- The following shall be considered major violations:
  - non-refrigerated transportation of perishables
  - lack of labelling or delivery note
  - clear lack of hygiene of vehicle and/or carrier
  - clearly altered foods (goods that do not meet the freshness characteristics required for the food – see the chapter "Purchasing Specifications", and/or clear parasitisation, or repeated failure to meet other minor specifications) must be notified immediately to the appropriate manager.
The following shall be considered minor violations:

- transporting goods in excess of +2°C over the maximum admissible temperature according to the product concerned
- minor hygiene shortcoming (dirty floors) in the vehicle
- the supplier not wearing a protective coat to unload foods in a clean area, or failure to wash hands upon entering clean areas, or any unhygienic behaviour, such as smoking, coughing over food, or chewing gum
- anomalies in regulatory authorisations as a carrier (e.g. expired ATP)
- isolated packaging within the same lot, broken or bulging
- missing information on labels or delivery note
- lack of freshness in some minor part of a single lot of fresh foods
- best before dates not exceeded but insufficient

Each hotel must keep its own control and record of warnings. Any major deficiencies must be notified immediately to the appropriate manager, and will be entered into the Record of Incidents and Corrective Measures and the Record of Warnings to Suppliers. Minor violations need not be notified to said departments, but a verbal warning must be given to the supplier and the carrier. This will be recorded in the Record of Warnings to Suppliers, and the Record of Incidents and Corrective Measures. When the number of minor violations exceeds 3 (three), the appropriate departments must be notified (purchasing, etc.) so that the case can be studied in detail.

**Records:**

- Entry of goods record:

This record is for the entry of goods received, which should include, as a minimum, the date of entry of the goods, the type of supply received, the supplier, number of delivery note or lot, amount and the hotel department that the supply is for. The **temperature** of any perishable goods obtained upon arrival (CCP 1) should also be recorded. When entering the temperature, use the least favourable from the units checked.

As a form of approval of the goods, and that they have been accepted, the person administering reception must sign the entry.

Any anomaly detected in any inspection should be included in the record, along with the corrective action taken. If the anomaly involves returning goods to the supplier, an entry should be made in the Record of Incidents and Corrective Measures (see below).

**MANAGING HEALTH ALERTS:**

If the hotel receives notification from any channel (health authorities, supplier, etc.) that any product does not meet the necessary conditions for its consumption, the following actions must be taken:

For a health alert, the type of food for which there is an alert is usually know, as well as the brand and the lot number or expiry date of the food in question.

- For **packaged or non-perishable food**, all stocks of the product in storage should be inventoried and checked by lot, checking the labelling. If a positive find is made, this must be placed on a "Product not approved" shelf, and a card or label must be added in a visible place that states "Product not fit for consumption. Immobilised". The management must be notified immediately, along with the consulting officer who routinely supervises the facilities.

- For **perishable foods or any food that has come free of its packaging and/or original label**, the possible product should be searched for, by carrying out an inventory of the storage areas, with a scrupulous observation of all food labelling.
Once a positive identification has been made, these perishables must be separated from all others and placed in isolated storage, in containers with lids, which must be labelled “Product not fit for consumption. Immobilised”. The management must be notified immediately, along with the consulting officer who routinely supervises the facilities.

If any of these foods have lost their original wrapping or packaging, and with it the original labelling, such as with ready-cut meats, the handling label for the meat should contain the reception date for the goods (it normally coincides with the reception date, or will be one or two days later), thus also obtaining the reception date for that article. To determine the lot number or expiry date of the food, having identified the reception date, the supplier should then be contacted, whose “forward traceability” system should be able to provide the lot number and/or best before dates for the item supplied on the day in question. If the supplier states that said article does coincide with the product placed on alert, it must then be immobilised.

- Furthermore, in the event of a health alert, any prepared or semi-prepared product that contains any commercial product as an ingredient that coincides with the product placed on alert, these dishes must be separated from the others and placed in isolated storage, in containers with lids, which must be labelled “Product not fit for consumption. Immobilised”. The management must be notified immediately, along with the consulting officer who routinely supervises the facilities. This is due to the need to check in duplicate that the internal traceability systems implemented in the hotel operate correctly.

- Any failure or doubt in the efficacy of being able to determine information will automatically lead to the complete immobilisation of all articles of the product on alert, regardless of their appearance.

The minimum information with which the system can be considered valid is as follows:

- Supplier, and
- Date of reception (having investigated with supplier to determine lot and/or consumption dates). Essential in products for which the packaging and original labelling is discarded, or
- Lot number, or
- Expiry or best before date.

This immobilisation extends to all prepared or semi-prepared products that may have the raw material placed on alert as an ingredient.

- **Record of Incidents and Corrective Measures:** this should be filled out each time any hygiene or health incident occurs that involves returning the item to the supplier or issuing a warning to the supplier in the event of any Purchasing Specifications not being met. The use of this record bears no relation to whether or not a supplier may receive a warning.

- **Record of Warnings to Suppliers:** an entry should be made for all successive warnings issued to a supplier due to a failure to meet the Purchasing Specifications, depending on whether the violation is considered major or minor. When the number of minor violations reaches 3, or a major violation occurs, the responsible party must be informed and provided with all the relevant information.

It is important that by using the number and date of a specific warning, the facts surrounding the Incident can be "recovered" by means of the information entered in the Record of Incidents. Example: if on 01/09/06, Supplier X has supplied the hotel with packs of olives, and some of the packs are found to be broken, the fact should be entered in the Record of Incidents, and the supplier should receive a verbal warning, which should then be entered in the Record of Warnings. If this is discovered to be the third minor violation committed by the supplier (two previous violations committed on 06/02/06 and on 25/07/06), because the dates of the violations have been included in Record, it is possible to "recover" the information on those violations by simply checking past records of incidents. This information should be issued to the responsible party.
Appendix:

- Entry of goods record.
- Record of Incidents.
- Specific Specifications for Supplies.
- Record of Warnings to Suppliers.

SPECIFIC SPECIFICATIONS FOR SUPPLIES

The Kitchen Manager and Store Manager must make themselves aware of the characteristics of the food products acquired. The Kitchen Manager should check perishable food items, and the Store Manager should check non-perishables.

Special attention must be made to the following products:

- **FISH AND SEAFOOD**: organoleptic testing of the product, ensuring that it has a firm consistency, scales that adhere to the skin, red gills, bright and not sunken eyes, and an appropriate smell (with no hint of ammonia).
  
  Check visually for the absence of parasites (Anisakis) in the flesh of fish.
  
  Check that pieces are supplied in polyexpan boxes, covered with ice and with no water.
  
  Check that the foods are correctly labelled in accordance with the country's regulations.

In the specific cases of:

- Crustaceans (crayfish, prawns, crabs, etc.) and cephalopods (squid, cuttlefish, octopus, etc.): as well as performing organoleptic testing, lobsters and crabs should be purchased alive or ready cooked, and the females should have no eggs attached.
- Bivalve molluscs (mussels, oysters, etc.): should be alive when purchased and be appropriately labelled, which should include the corresponding health certificate.
- Defrosted fish: defrosted fish may be purchased, providing that the producer is certified and the defrosting has taken place in establishments authorised for this purpose, and this should be made clear on the labelling.

- **MEATS**: cuts of meat should have all the characteristics of fresh produce, with a juicy appearance, a more or less intense red colour, firm to the touch, shine at the cut, its own smell, with no tackiness or abnormal seepage. Meat should be free of entrails and blood, with no fluid retention or bruising.

  Check that pieces are labelled correctly, in accordance with the country's regulations.

- **EGGS**: only whole, clean eggs free of any defects can be accepted. Any that are dirty, broken, cracked or deformed in the shell must be discarded.
  
  Egg boxes must be correctly identified.

- **OTHER EGG PRODUCTS**: these must be correctly identified according to the appropriate legislation.

- **MILK AND MILK PRODUCTS**: Labelling should be in accordance with the country's regulations.

- **FROZEN PRODUCTS**: frozen products must not have been defrosted and refrozen. Factors indicating poor conservation or irregularities in the cold chain are: frost, discoloration (yellowish or brown in fish, darkening in meat), noticeable softness to the touch, breaks or tears, etc.

- **DRY LEGUMES**: Should have clean, shiny skin, free from wrinkles and impurities, and evenly sized.
- **FRUIT AND VEGETABLES**: should be clean, healthy, identified and classed according to their commercial variety. The boxes provided by suppliers must be in a proper state of cleanliness. Wooden boxes must be discarded. Once unloaded, they must be transferred to the hotel's own boxes.
4. STORING FOODS IN REFRIGERATORS AND FREEZERS

Form: 4
Version: 08/07

**Standard:** Storing foods in refrigerators and freezers **Responsible:** Kitchen Manager and Assistant Kitchen Manager

**General regulations:**

- All refrigerated and frozen foods must be stored within 15 minutes of reception.
- All refrigerators must be kept between 0 and 4\(^\circ\) C, except for the fish refrigerator, which must be kept between \(0\) and 2\(^\circ\) C, and the vegetable refrigerator, which must be kept between 6 and 8\(^\circ\) C. These temperatures must be controlled at least once a day, at the beginning of the working day, and the results noted in the Refrigerator Temperatures Control Record.
- Freezers (including chest freezers) should be kept at a temperature of at least \(-18\)^\circ C.
- All foods should be stored in such a way that eliminates cross contamination. To achieve this, they should be placed in separate cold stores according to the type of food. If storing raw and prepared foods in the same refrigerator is unavoidable (Day Fridge, cold service stations in kitchens), the following placement order for foods should be observed, from top shelf to bottom:
  - Prepared foods
  - Milk products, sausage meats and eggs
  - Red meats
  - Game meats
  - Fruit, vegetables

- In freezers, raw and prepared products should be separated by grouping food types on different shelves.
- Foods that are still hot must not be placed in freezers, to prevent temperature increases and possible condensation. If a product is to be frozen, it should be done in the smallest amount possible to ensure speed in the freezing process, using a blast chiller, if available.
- All stored foods must be protected or placed in food-grade plastic containers with a hermetically sealed lid. Food-grade film may also be used to cover foods, but must not be used with very fatty foods. Under no circumstance may waste bags, paper or cloths be used, even for freezing products.
- Meats and fish that give off liquid must be placed on a strainer or perforated tray within the recipient, to prevent contact between the food and the liquid.
- Any original supplier's packaging placed in refrigerators must be suitably clean for this purpose. If the packaging needs to be changed, the food should then be re-labelled.
- Avoid placing wood and cardboard in refrigerators. If for logistical purposes it is impossible not to use cardboard in cold storage, it should always be placed on lower shelves and where all foods have the correct packaging.
- Once metals cans have been opened, if their content is not to be used immediately, it should be transferred to a suitable food-grade container.
- Do not place foods or their containers on the floor, even when properly packed and baled. They should be placed on shelves at least 15 cm from the floor.

- Utensils such as ladles, spoons, etc. must not be used inside storage recipients.

- All prepared foods must be identified using labels indicating what the product is and the date on which it was prepared. Raw products (meats, fish, etc.) must be correctly identified with the label provided by the supplier. If the original packaging is discarded, the food in question must be labelled with the handling date (see chapter on "Maintaining Food Traceability").

- The rules apply equally to refrigeration and freezing. For freezing products, the label should also contain the date of freezing.

- A suitable product rotation procedure should be used, observing the "first in first out" principle (FIFO).

- Observe and abide by best before and use-by dates. Observe and abide by the following secondary use-by dates for prepared foods:

  **PREPARED FOODS:** use within **72 hours**

  **CANNED MEATS AND VEGETABLES** once opened:
  use within **72 hours**

- For dishes containing egg or egg products, the maximum duration is:

  **FOODS WITH EGG OR EGG PRODUCTS:** use within **24 hours**

- For prepared and vacuum-packed foods, the maximum duration is:

  **PREPARED AND VACUUM-PACKED FOODS:** maximum **14 days**

- For correctly packed meats and fish received, the dates indicated by the manufacturer should be observed, but if these foods are removed from their packing, from that point on they must be stored in suitable recipients (in other cases they must be vacuum packed) and the following expiry dates observed:

  **FRESH MEAT WITHOUT PACKING:** prepare within **3 days**
  (except for large pieces covered in fat, which must be aired until reaching desired maturation, e.g. rib-eye steak)

  **FRESH FISH WITHOUT PACKING:** prepare within **2 days**
FRESH MEATS CUT AND RE-VACUUM-PACKED: prepare within 15 days
FRESH FISH FILLETED AND RE-VACUUM-PACKED: prepare within 7 days

- For freezing, as a general rule the useful life is:

FROZEN FOODS: use within 3 months

- The rules on separating raw and prepared products, with a closed lid and the correct date on the label, applies not only to cold storage, but also to cold stations and reach-in fridges.

Dangers:

1. Contamination by micro-organisms or their toxins through the use of unsuitable or dirty packing material, or in refrigeration units with a deficient cleaning process, which can lead to cross contamination.
2. Contamination by foreign bodies, pests or toxic substances.
3. Growth of micro-organisms that can cause food poisoning due to an inadequate temperature in refrigeration units (CCP 2 and CCP 7).
4. Deterioration of foods by frost burn due to low temperatures in freezers and foods not being protected.

Preventive Measures:

For dangers 1 and 2:

- Daily visual inspection of the cleanliness, order and stacking in all refrigeration units.

For dangers 3 and 4:

- The Kitchen Manager, or if absent the Assistant Kitchen Manager (or Store Manager if in dry store area) must note and record the ambient temperature in refrigerators and freezers at least once a day, at the beginning of the working day. To do this, observe the temperature read-outs for the corresponding units (CCP 2 and CCP 7).
- The readings must be entered into the Refrigerator Temperatures Control Record. This record should also indicate the time the control was performed and the person responsible, as well as any incident observed and the corrective measure taken.
- Do not take temperature reading when in defrosting cycle, but wait until this process has completed.

Monitoring:

For dangers 1 and 2:

- Review refrigeration units on a daily basis to ensure that raw-food separation is being implemented effectively, that all food is correctly labelled, dated, stacked and off the floor.
For dangers 3 and 4:

- Observe and record refrigeration unit temperatures as described in the previous section, at least once a day, at the beginning of the working day. The readings must be entered into the Refrigerator Temperatures Control Record (CCP 2 and CCP 7).

**Corrective measures:**

For dangers 1 and 2:

- Any food found not protected must be immediately protected, and any that shows contamination by foreign bodies, that may have been affected by cross contamination or which shows signs of frost burning must be shown the Kitchen Manager or Assistant to decide whether it should be discarded.

For dangers 3 and 4:

- If the ambient temperature in the refrigeration unit is outside the established safety limits, Hotel Technical Services should be informed immediately, so that the necessary repairs can be made.
- If the temperature is between 5 and 10$^\circ$ C, wait 30 minutes before taking another reading to check whether the temperature returns to within the safety margin. If it does not, the following measures must be taken:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Final temp.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerator</td>
<td>4.1$^\circ$ - 10$^\circ$ C</td>
<td>The foods are acceptable, and must be transferred to another unit and used as soon as possible (24 hours max. for prepared foods)</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>≥10.1$^\circ$ C</td>
<td>Discard all perishable foods</td>
</tr>
<tr>
<td>Freezer</td>
<td>Between -12$^\circ$ and -18$^\circ$ C</td>
<td>The foods are acceptable and must be used as soon as possible</td>
</tr>
<tr>
<td>Freezer</td>
<td>&gt; -12.1$^\circ$ C</td>
<td>Considered defrosted (except ice-creams, which should be discarded). Use as soon as possible (animal products should be cooked within 24 hours)</td>
</tr>
</tbody>
</table>

**Records:**

- The Refrigerator Temperatures Control Record (CCP 2 and CCP 7) must be completed on a daily basis. This should be done at the beginning of the working day, in order to detect any possible faults or breakdowns during the night.
- This record should include a thermometer reading for each refrigeration unit, the time that it was taken and the initials of the person carrying out the control.
- Any deviation of the temperature outside the established limits (by means of two readings taken 30 minutes apart) must be noted in the observations section and the hotel’s Technical Services informed, using the Fault Report Form. If the repair cannot be carried out on the same day, the measures taken should be detailed on the Fault Report Form (placing special emphasis on the destination of the affected product) and the date estimated for the problem to be resolved.

**Appendix:**
- Refrigerator Temperatures Control Record.
- Record of Incidents.
- Fault Report Form.
HACCP INTERNAL CONTROL SYSTEM: IMPLEMENTATION AND DOCUMENTATION

For the internal control system to be implemented properly and logically, suitable preparation and planning is required. It is vital for the managers in each hotel and all departments understand and are committed to HACCP initiatives.

An HACCP plan and its pre-requisites or General Hygiene Plan are a series of documents that establish specific practices, resources and a sequence of activities in order to guarantee food safety. In both cases, the following is required:

1. Documentation describing the HACCP plan and its pre-requisites or General Hygiene Plan, which this Operating Manual aims to provide the basis for, by describing the procedures, instruction and specifications that must be followed in the chain’s kitchens.
2. Records of the plan’s implementation and effectiveness, such as the models to be found in the appendices of this manual.
3. A document and record archive system that is easy to use and to manage.

The two sequential and complementary sections below deal with implementing an HACCP internal control system.

I. Implementing the pre-requisites
II. Implementing the HACCP plan proper.

PRE-REQUISITES OR GENERAL HYGIENE PLANS

The pre-requisites or General Hygiene Plans of an HACCP plan are essential for food safety and are complementary to and indispensable for the HACCP plan to implemented effectively. The pre-requisites of an HACCP system are defined as all necessary practices and conditions prior to and during the implementation of an HACCP plan, and which are essential for food safety.

The initial pre-requisites are as follows:

1. Staff training plan
2. Premises, installations and equipment maintenance plan
3. Cleaning and disinfection plan
4. Pest control plan
5. Water supply plan
6. Best practices in food production/handling plan
7. Supplier traceability and control plan
8. Waste and waste water management plan

Below is a description for each pre-requisite of the documentation that must be provided for each plan to be implemented. The control system for each of these plans is listed on the corresponding form in this Operating Manual.

I. Staff Training Plan:
To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed. The following documentation must also be included:

Elements to include in the Training Plan:

→ Up-to-date list of employees and their positions.
→ Copy of each employee’s training certificates.

II. Maintenance Plan for Premises, Installations and Equipment:
To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed. The following documentation must also be included:

### Elements to include in the Maintenance Plan:

- Plan of hotel premises and installations relating to the storage, preparation and service of meals (central kitchen, cold rooms, wash areas, store, service areas, waste rooms, etc.). The plan should indicate the areas or premises using a legend, and state the location of equipment (wash basins, refrigeration units, ovens, etc.).
- Procedures and activities to be carried out, their frequency and the persons responsible, in the event of these tasks being carried out by external companies, for which a technical assistance contract is required.

### III. Cleaning and Disinfection Plan:

To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed. The following documentation must also be included:

### Elements to include in the Cleaning and Disinfection Plan:

- A documented plan indicating relevant premises, installations and equipment, application methods, products to be used, frequency and persons in charge. To plan the frequency of cleaning tasks, a similar format to the form included in the appendices should be used. Using a blank format, the manager for each area must establish cleaning frequencies that are realistic and in line with the specific need of each kitchen and the resources available.
- The technical and safety specifications of all cleaning products used in areas where food is handled must be included.

### IV. Pest Control Plan:

To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed. The following documentation must also be included:

### Elements to include in the Pest Control Plan:

- Plan or diagram of the installations, indicating where traps, insectocutors, etc. are located, and how many are placed.
- Pest-control company service contract.
- Photocopy of the pest-control company's entry in the Official Register of Pest Control Services.
- Photocopies of the ID cards of pest control technicians.
- Situation diagnosis issued by the pest-control company on the characteristics of the outside environment, the properties of the structure and actual activity of the establishment.
- Technical fact sheet of the pesticides used.
- Certificates of monitoring and/or treatment issued by the pest-control company, including the diagnosis made on each visit.

### V. Water Supply Control Plan:

To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed. The following documentation must also be included:

### Elements to include in the Water Supply Control Plan:

- Plan of mains water and drainer system, which should include hot and cold water outlets, outlets subjected to osmosis or de-limescaling, and drains. The map should correctly identify all elements of the network, including cisterns, entry points, etc.
- Description of the type of supply, detailing the process that the water follows from entry to elimination (tank storage, chlorination, osmosis, de-limescaling, waste water, etc.).
- Description of cistern: capacity, use, materials, entry and exit points, drains, etc.
- Contract and/or invoice of external company hired to clean tanks and cisterns, including a description of the cleaning and disinfection procedure and maintenance work on the cistern and supply system. It should also include technical details of the cleaning products used.
VI. Supplier Traceability and Control Plan:
To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed. The following documentation must also be included:

Elements to include in the Supplier Traceability and Control Plan:

→ List of suppliers

VII. Best Practices in Food Production/Handling Plan:
To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed.

VIII. Waste and Waste Water Management Plan:
To implement the plan correctly, the regulations listed on the corresponding form of this Operating Manual must be observed. The following documentation must also be included:

Elements to include in the Waste and Waste Water Management Plan:

→ Copy of the official authorisation for the waste oil collection service manager, if appropriate.

HACCP PLAN

For the final application of the HACCP system, the following logical sequence should be used:

1. Forming an HACCP team
   Each hotel must designate its own team. Normally it should consist of the heads of each department involved in the process – Hotel Director, Kitchen Manager and Assistant, Store Manager, Restaurant Manager and Assistant, Head of Maintenance and Housekeeper. Others may also be included on the team, such as the Food and Beverages Manager or Quality Control Manager.
   The group must also have support from an external technician.
   The general responsibilities are as follows, and are detailed on each process and prerequisite control form:
<table>
<thead>
<tr>
<th>Name</th>
<th>Responsibility</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical-health auditor</td>
<td>Drawing up and revising the internal control system.</td>
<td>external</td>
</tr>
<tr>
<td>Hotel Director</td>
<td>System verification.</td>
<td></td>
</tr>
<tr>
<td>Kitchen Manager and Assistant Kitchen Manager</td>
<td>Monitoring and implementing GHP corrective actions: C&amp;D, D&amp;D, traceability and training. Monitoring refrigeration unit temperature. Area of responsibility: Kitchen, cold room, show-cooking and refrigeration units. For wash and storage.</td>
<td></td>
</tr>
<tr>
<td>Head of maintenance</td>
<td>Monitoring and implementing GHP corrective actions: drinking water control, maintenance of installations and equipment.</td>
<td></td>
</tr>
<tr>
<td>Store Manager</td>
<td>Monitoring and implementing the following GHP corrective actions: C&amp;D, D&amp;D, traceability and supply specifications. Area of responsibility: Store room and refrigeration units.</td>
<td>Hotel Sol Meliá</td>
</tr>
<tr>
<td>Food &amp; Beverages Manager</td>
<td>System verification.</td>
<td></td>
</tr>
<tr>
<td>Quality Control Manager</td>
<td>System verification.</td>
<td></td>
</tr>
<tr>
<td>Housekeeper</td>
<td>Monitoring and implementing GHP corrective actions: C&amp;D, D&amp;D. Area of responsibility: intermediate areas (corridors, stairs and goods reception area).</td>
<td></td>
</tr>
</tbody>
</table>

Before an HACCP manual is implemented, each hotel director must revise, approve and if necessary sign the document for it to be implemented.

2. **General information, Description of product and activity**

   Plans or diagrams of the installations showing the surface areas of all food zones and relevant equipment (refrigeration units, ovens, mixers, etc.). These plans should also indicate toilets and changing areas, storage rooms, waste rooms, goods reception area, elevator, etc.). These plans should describe the clean and dirty circuits, and where the lines cross appropriate measures should be taken to avoid the possibility of cross contamination (e.g. using different elevators for food and for waste, separating the times when they are moved, and cleaning and disinfecting areas where food and waste are in transit, etc.) These preventive measures should be indicated in the **specific document** called "Assessment and preventive measures based on the process flow chart". Information posters should be made of the preventive measures adopted, and these should be placed where all staff can see them.

   **Fact sheets** should be made for all the dishes available for clients, both à la carte and banquet dishes. These sheets must list the ingredients and composition of each dish, how it is prepared (including temperatures and cooking times), preservation details and service (including preservation times). As a minimum requirement, a copy of the menu should be provided, though it is highly recommended to produce fact sheets for each dish.

   It should also be made clear what kind of food service is provided in the hotel, specifying whether it is a "breakfast only" hotel, whether banquets are held, if there is a buffet or self-service option, if there is room service or poolside service, etc. Specify place setting capacity.
3. **Produce the flow chart**

The flow chart is a graphic depiction of the production process of the dishes provided, from the arrival of the raw materials and ingredients through to service. Flow charts are usually very similar in different hotels. The external technician is responsible for producing the definitive flow chart for each hotel in particular.

The general basic model is as follows:

**FLOW CHART OF THE FOOD-PRODUCTION PROCESS**

**WITHOUT HEAT TREATMENT.**

- **RAW MATERIALS AND INGREDIENTS RECEIVED**
- **IN FREEZER**
  (Temp. ≤-18°C / min 24 h)
  for fish served raw and frozen confectionery
- **STORAGE**
- **AT NON-REGULATED TEMP.**
  (Temp. +10 to +20°C)
- **HANDLING AND PREPARING INGREDIENTS**
- **REFRIGERATED**
  (Temp. 0 to +4°C)
- **CLEANING:**
  CHOPPING VEGETABLES
- **DISINFECTING VEGETABLES**
- **DEFROSTING IN REFRIGERATOR**
  (Temp. 0 to +30°C)
- **STORAGE IN REFRIGERATOR**
  (Temp. 0 to +4°C)
- **SERVICE**
FLOW CHART OF THE FOOD-PRODUCTION PROCESS WITH HEAT TREATMENT.

RAW MATERIALS AND INGREDIENTS RECEIVED → STORAGE

- AT NON-REGULATED TEMP
- REFRIGERATED (Temp 0±4°C)
- IN FREEZER (Temp -18°C)

HANDLING AND PREPARING INGREDIENTS

CLEANING-CHOPPING VEGETABLE
CLEANING-PORTIONING FISH
CLEANING-PORTIONING MEAT

DEFROSTING IN REFRIGERATOR (Temp 0±6°C)

VACUUM PACKING

FRYING, COOKING (Temp ≥ 65°C)

DEFROSTING IN REFRIGERATOR

STORAGE IN REFRIGERATOR (Temp 0±6°C/5 days
max)

STORAGE IN FREEZER (Temp -18°C/5 months)

STORAGE IN REFRIGERATOR (Temp -80°C/2 h max)

REHEATING (Temp ≥ 70°C)

CHILLING (Temp ≤10°C/24 h)

SERVICE

*Vacuum packing raw materials is limited to cuts of meat and fresh fish.
4. **Verify the flow chart**

The work team must verify how exact the flow chart is by comparing it with food preparation activities at all stages of the working day. If any errors are detected, the flow chart should be modified accordingly.

5. **Enumerate all the dangers associated with each stage of the process and all the preventive measures.**

With the help of the external technician, the HACCP team should enumerate all the biological, chemical or physical risks that can be reasonably prevented at each stage of the production process, and describe the preventive measures that can be applied to control these risks (eliminating them or reducing them to acceptable levels).

6. **Apply the decision tree to identify CCPs (critical control points) at each stage.**

Identifying CCPs is made easier by applying a sequence of decisions. The type and number of CCPs varies widely. Any factors relating to the design of the premises, the equipment and utensils used, etc. that prevent maximum guarantees of health and hygiene are CCPs that are, in principle, unnecessary. On the other hand, good handling practices will also eliminate unnecessary CCPs at some points or stages of the process.

The work group, with the advice of the external technician, must determine where these CCPs are in each hotel.

7. **Establish the critical limits for each CCP.**

Critical limits are established for each preventive measure (temperature, time, etc.). The work group, with the advice of the technician from Bio 9000, must determine what these critical limits are.

8. **Establish a monitoring system.**

Monitoring means making a plan to measure or observe a CCP with regard to its critical limits. The procedures used for this process must be able to detect when a CCP is out of control. The way to monitor and the actions to take for each process are detailed on each operating form in this manual.

9. **Establish a corrective action plan.**

As described by the forms in this manual. This allows the CCP to be brought back under control.

(The information from points 5 to 8 may be included in a separate and easy-to-read Management Chart. An example is provided.)
10. **Verify the system.**

The necessary procedures should be established to verify that the HACCP system works properly. Monitoring and observation methods should be used for this purpose, as well as laboratory testing and periodic external auditing carried out by external consultants with a proven track record.

The purpose is to check that the internal control system is effective. The hotel director is responsible for verifying the system. The hotel will employ the services of external consultants to carry out analyses and external audits, with a frequency determined for each hotel depending on productivity levels and degrees of risk.

The external audit and internal control verification system includes:

A. **Sampling and analysis** at each visit by the external technician of the following:

- **Drinking water:** At least once a year, a water sample will be taken to check that it meets the current regulations and to verify the drinking water control plan. In this case, the parameters and values to be analysed are those specified previously in the section on drinking water controls, though microbiological analyses will also be performed periodically (aerobic bacteria at 22°C, E. coli and total coliforms).
- **Surfaces** in contact with food, in order to verify the cleaning and disinfection plan for installations and equipment, and in particular to check that surfaces that come into contact with food and could cause contamination are disinfected correctly. **Three sterile swabs** are taken (two from different work surfaces and one from the hand of a food handler). The established microbiological limits are included in the Cleaning and Disinfection Plan.
- For prepared products, **four samples** will be taken by the external technician, on a monthly basis. These samples should be taken randomly, with special emphasis on prepared foods that are nearing their use-by limit. As a general rule, samples should be taken as follows:
  - One sample from a food prepared hot
  - One sample from a food prepared cold
  - One sample from a dessert
  - One sample to be chosen by the kitchen manager.

Two of the samples will be submitted for analysis to detect pathogens or any indicators of a lack of hygiene (salmonella and listeria), and the other two will be tested for total coliforms. Any unsatisfactory results will lead to an investigation being opened and corrective measures applied as recommended by the laboratory and external auditor, and these must be entered in the RECORD OF INCIDENTS. The subsequent samples taken will then be from the same food type that led to the previous situation.

Sample analysis results will be issued in the laboratory's test report, and will then be archived and made available to the competent health authority for at least two years.

*(For menus for banquets or large group (more than 30 people), food samples will be kept from the dishes provided. These will consist of individual rations that must be kept for at least **5 days in refrigeration**.)*

B. **Supervision of records and documentation:**

Daily control records, record of incidents and corrective actions, etc. by the hotel director and as a result of the monthly visit from the consultant technician. The HACCP work group will also study the audit report produced by the external consultants and produce a documented action plan to correct any problems. **The frequency of these inter-departmental meetings will be decided by the director of each hotel individually.**

C. **Checking the calibration of measuring instruments:**

Refrigeration unit thermometers will be checked by the laboratory using a calibrated thermometer.
D. **Checking best food-handling practices** as part of the food-handling staff's training, by means of:

- Internal control: direct observation by the director (or if unavailable by the quality control manager, food & beverages manager or kitchen manager). This verification should then be entered in the **INTERNAL CONTROL SYSTEM VERIFICATION RECORD**.
- External control: periodic audits performed by the external consultants.

E. **Checking degree of staff involvement** in the internal control system.

11. **Establishing records and archiving documentation.**

A monitoring system will be established for each CCP, which should be indicated in the appropriate records and corresponding control forms.

In general terms, the records to be used are as follows (they are all contained in the appendix to this manual):

- ENTRY OF GOODS RECORD
- DAILY CONTROL RECORD (HYGIENE AND CLEANING) One per area manager.
- RECORD OF INCIDENTS
- VEGETABLE DISINFECTION CONTROL RECORD
- OVEN TEMPERATURE CONTROL RECORD (COOKING, CHILLING AND REHEATING) BANQUETS
- BUFFET TEMPERATURES CONTROL RECORD
- EQUIPMENT TEMPERATURE CONTROL RECORD
- CHLORINE, PH AND ORGANOLEPTIC TESTING OF DRINKING WATER CONTROL RECORD
- FRYING OIL CONTROL RECORD
- CONTINUOUS TRAINING RECORD
- INTERNAL CONTROL SYSTEM VERIFICATION RECORD

All records created and revised by the hotel management must be kept in specific folders and be always available for inspection for a period of at least two years, though this may be reduced by the competent authority.
### FOOD RECEPTION CONTROL

<table>
<thead>
<tr>
<th>Date</th>
<th>Supplier and/or delivery note no.</th>
<th>Product</th>
<th>Lot no.</th>
<th>Amount (kg)</th>
<th>Conditions of transport (a)</th>
<th>Condition of products (b)</th>
<th>Suitable expiry date?</th>
<th>Where stored (c)</th>
<th>Temp (°C)</th>
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### VERIFICATION

### OBSERVATIONS AND/OR CORRECTIVE MEASURES:

### NOTES:

1. Score the conditions in which the goods were transported (refrigeration, exclusive use, cleanliness, etc.) as either GOOD (G) or BAD (B).
2. Score the condition that the goods arrived in (packaging clean and intact, labelling correct, expiry dates, smell and appearance, etc.) as either GOOD (G) or BAD (B).
3. Enter "Yes" or "No" depending on whether or not the use-by date has been exceeded.
4. Indicate where the product is to be stored until use.
5. Enter the transport temperature, taken using a disinfected probe thermometer. (For perishables):
6. Enter the initials of the person receiving the goods (responsible for monitoring reception).

In the verification section, enter ✓ once the document has been checked.

An entry of B (deficient) means that the supplier must be informed and/or the goods returned. Return the goods to the supplier if use-by dates have expired.

Ref. Supplier traceability and control plan.
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**Note:**
Please fill up the location and date.

**Shelf Life Standard:**
- Fridge: +4°C to +6°C
- Freezer: -18°C to -20°C
# Temperature Log - Fridges & Freezers

**Location:** Standing Freezer Sakura

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<th>Time</th>
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**NOTE:**
Please fill up the location and date.

**Shelf Life Standard**
Fridge: 18°C - 20°C
Freezer: -18°C - -22°C
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<tr>
<th>No</th>
<th>Jenis Makanan</th>
<th>E.coli</th>
<th>Salmonella</th>
<th>Shigella</th>
<th>Staph. aureus</th>
<th>V.cholera / V. para haemoliticus</th>
<th>Strepto-coccus</th>
<th>Angka kuman (jml.koloni/ml)</th>
<th>Batas Syarat Maksimum per gram/ml</th>
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<tbody>
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Kesimpulan: Hasil pemeriksaan sampel diatas Sampel No. 11 dan 16 Positive E. Coli dan Sampel No. 24 Jumlah Angka Kuman melebihi batas yang dijukran, (Permenkes RI No 712 / Menkes/Per/X/1986).

Denpasar, 12 September 2009
Kasub Lab. Kesling

Dian Saffiri
Nip. 140362366
## TOTAL TRAINING HOURS RECAPITULATION

**TRAINING AND DEVELOPMENT**

**HUMAN RESOURCES DEPARTMENT**

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HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP) SYSTEM AND GUIDELINES FOR ITS APPLICATION

Annex to CAC/RCP 1-1969 (Rev. 4 - 2003)

PREAMBLE

The first section of this document sets out the principles of the Hazard Analysis and Critical Control Point (HACCP) system adopted by the Codex Alimentarius Commission. The second section provides general guidance for the application of the system while recognizing that the details of application may vary depending on the circumstances of the food operation.2

The HACCP system, which is science based and systematic, identifies specific hazards and measures for their control to ensure the safety of food. HACCP is a tool to assess hazards and establish control systems that focus on prevention rather than relying mainly on end-product testing. Any HACCP system is capable of accommodating change, such as advances in equipment design, processing procedures or technological developments.

HACCP can be applied throughout the food chain from primary production to final consumption and its implementation should be guided by scientific evidence of risks to human health. As well as enhancing food safety, implementation of HACCP can provide other significant benefits. In addition, the application of HACCP systems can aid inspection by regulatory authorities and promote international trade by increasing confidence in food safety.

The successful application of HACCP requires the full commitment and involvement of management and the work force. It also requires a multidisciplinary approach; this multidisciplinary approach should include, when appropriate, expertise in agronomy, veterinary health, production, microbiology, medicine, public health, food technology, environmental health, chemistry and engineering, according to the particular study. The application of HACCP is compatible with the implementation of quality management systems, such as the ISO 9000 series, and is the system of choice in the management of food safety within such systems.

While the application of HACCP to food safety was considered here, the concept can be applied to other aspects of food quality.

DEFINITIONS

Control (verb): To take all necessary actions to ensure and maintain compliance with criteria established in the HACCP plan.

Control (noun): The state wherein correct procedures are being followed and criteria are being met.

Control measure: Any action and activity that can be used to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Corrective action: Any action to be taken when the results of monitoring at the CCP indicate a loss of control.

Critical Control Point (CCP): A step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Critical limit: A criterion which separates acceptability from unacceptability.

2 The Principles of the HACCP System set the basis for the requirements for the application of HACCP, while the Guidelines for the Application provide general guidance for practical application.
Deviation: Failure to meet a critical limit.

Flow diagram: A systematic representation of the sequence of steps or operations used in the production or manufacture of a particular food item.

HACCP: A system which identifies, evaluates, and controls hazards which are significant for food safety.

HACCP plan: A document prepared in accordance with the principles of HACCP to ensure control of hazards which are significant for food safety in the segment of the food chain under consideration.

Hazard: A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect.

Hazard analysis: The process of collecting and evaluating information on hazards and conditions leading to their presence to decide which are significant for food safety and therefore should be addressed in the HACCP plan.

Monitor: The act of conducting a planned sequence of observations or measurements of control parameters to assess whether a CCP is under control.

Step: A point, procedure, operation or stage in the food chain including raw materials, from primary production to final consumption.

Validation: Obtaining evidence that the elements of the HACCP plan are effective.

Verification: The application of methods, procedures, tests and other evaluations, in addition to monitoring to determine compliance with the HACCP plan.

PRINCIPLES OF THE HACCP SYSTEM

The HACCP system consists of the following seven principles:

PRINCIPLE 1

Conduct a hazard analysis.

PRINCIPLE 2

Determine the Critical Control Points (CCPs).

PRINCIPLE 3

Establish critical limit(s).

PRINCIPLE 4

Establish a system to monitor control of the CCP.

PRINCIPLE 5

Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control.

PRINCIPLE 6

Establish procedures for verification to confirm that the HACCP system is working effectively.
**PRINCIPLE 7**

Establish documentation concerning all procedures and records appropriate to these principles and their application.
GUIDELINES FOR THE APPLICATION OF THE HACCP SYSTEM

INTRODUCTION

Prior to application of HACCP to any sector of the food chain, that sector should have in place prerequisite programs such as good hygienic practices according to the Codex General Principles of Food Hygiene, the appropriate Codex Codes of Practice, and appropriate food safety requirements. These prerequisite programs to HACCP, including training, should be well established, fully operational and verified in order to facilitate the successful application and implementation of the HACCP system.

For all types of food business, management awareness and commitment is necessary for implementation of an effective HACCP system. The effectiveness will also rely upon management and employees having the appropriate HACCP knowledge and skills.

During hazard identification, evaluation, and subsequent operations in designing and applying HACCP systems, consideration must be given to the impact of raw materials, ingredients, food manufacturing practices, role of manufacturing processes to control hazards, likely end-use of the product, categories of consumers of concern, and epidemiological evidence relative to food safety.

The intent of the HACCP system is to focus control at Critical Control Points (CCPs). Redesign of the operation should be considered if a hazard which must be controlled is identified but no CCPs are found.

HACCP should be applied to each specific operation separately. CCPs identified in any given example in any Codex Code of Hygienic Practice might not be the only ones identified for a specific application or might be of a different nature. The HACCP application should be reviewed and necessary changes made when any modification is made in the product, process, or any step.

The application of the HACCP principles should be the responsibility of each individual businesses. However, it is recognised by governments and businesses that there may be obstacles that hinder the effective application of the HACCP principles by individual business. This is particularly relevant in small and/or less developed businesses. While it is recognized that when applying HACCP, flexibility appropriate to the business is important, all seven principles must be applied in the HACCP system. This flexibility should take into account the nature and size of the operation, including the human and financial resources, infrastructure, processes, knowledge and practical constraints.

Small and/or less developed businesses do not always have the resources and the necessary expertise on site for the development and implementation of an effective HACCP plan. In such situations, expert advice should be obtained from other sources, which may include: trade and industry associations, independent experts and regulatory authorities. HACCP literature and especially sector-specific HACCP guides can be valuable. HACCP guidance developed by experts relevant to the process or type of operation may provide a useful tool for businesses in designing and implementing the HACCP plan. Where businesses are using expertly developed HACCP guidance, it is essential that it is specific to the foods and/or processes under consideration. More detailed information on the obstacles in implementing HACCP, particularly in reference to SLDBs, and recommendations in resolving these obstacles, can be found in “Obstacles to the Application of HACCP, Particularly in Small and Less Developed Businesses, and Approaches to Overcome Them” (document in preparation by FAO/WHO).

The efficacy of any HACCP system will nevertheless rely on management and employees having the appropriate HACCP knowledge and skills, therefore ongoing training is necessary for all levels of employees and managers, as appropriate.

APPLICATION

The application of HACCP principles consists of the following tasks as identified in the Logic Sequence for Application of HACCP (Diagram 1).
1. **Assemble HACCP team**

The food operation should assure that the appropriate product specific knowledge and expertise is available for the development of an effective HACCP plan. Optimally, this may be accomplished by assembling a multidisciplinary team. Where such expertise is not available on site, expert advice should be obtained from other sources, such as, trade and industry associations, independent experts, regulatory authorities, HACCP literature and HACCP guidance (including sector-specific HACCP guides). It may be possible that a well-trained individual with access to such guidance is able to implement HACCP in-house. The scope of the HACCP plan should be identified. The scope should describe which segment of the food chain is involved and the general classes of hazards to be addressed (e.g. does it cover all classes of hazards or only selected classes).

2. **Describe product**

A full description of the product should be drawn up, including relevant safety information such as: composition, physical/chemical structure (including $A_	ext{ox}$, pH, etc), microcidal/static treatments (heat-treatment, freezing, brining, smoking, etc), packaging, durability and storage conditions and method of distribution. Within businesses with multiple products, for example, catering operations, it may be effective to group products with similar characteristics or processing steps, for the purpose of development of the HACCP plan.

3. **Identify intended use**

The intended use should be based on the expected uses of the product by the end user or consumer. In specific cases, vulnerable groups of the population, e.g. institutional feeding, may have to be considered.

4. **Construct flow diagram**

The flow diagram should be constructed by the HACCP team (see also paragraph 1 above). The flow diagram should cover all steps in the operation for a specific product. The same flow diagram may be used for a number of products that are manufactured using similar processing steps. When applying HACCP to a given operation, consideration should be given to steps preceding and following the specified operation.

5. **On-site confirmation of flow diagram**

Steps must be taken to confirm the processing operation against the flow diagram during all stages and hours of operation and amend the flow diagram where appropriate. The confirmation of the flow diagram should be performed by a person or persons with sufficient knowledge of the processing operation.

6. **List all potential hazards associated with each step, conduct a hazard analysis, and consider any measures to control identified hazards**

(SEE PRINCIPLE 1)

The HACCP team (see “assemble HACCP team” above) should list all of the hazards that may be reasonably expected to occur at each step according to the scope from primary production, processing, manufacture, and distribution until the point of consumption.

The HACCP team (see “assemble HACCP team”) should next conduct a hazard analysis to identify for the HACCP plan, which hazards are of such a nature that their elimination or reduction to acceptable levels is essential to the production of a safe food.

In conducting the hazard analysis, wherever possible the following should be included:

- the likely occurrence of hazards and severity of their adverse health effects;
- the qualitative and/or quantitative evaluation of the presence of hazards;
• survival or multiplication of micro-organisms of concern;
• production or persistence in foods of toxins, chemicals or physical agents; and,
• conditions leading to the above.

Consideration should be given to what control measures, if any exist, can be applied to each hazard.

More than one control measure may be required to control a specific hazard(s) and more than one hazard may be controlled by a specified control measure.

7. **Determine Critical Control Points**

   *(SEE PRINCIPLE 2)*

There may be more than one CCP at which control is applied to address the same hazard. The determination of a CCP in the HACCP system can be facilitated by the application of a decision tree (e.g., Diagram 2), which indicates a logic reasoning approach. Application of a decision tree should be flexible, given whether the operation is for production, slaughter, processing, storage, distribution or other. It should be used for guidance when determining CCPs. This example of a decision tree may not be applicable to all situations. Other approaches may be used. Training in the application of the decision tree is recommended.

If a hazard has been identified at a step where control is necessary for safety, and no control measure exists at that step, or any other, then the product or process should be modified at that step, or at any earlier or later stage, to include a control measure.

8. **Establish critical limits for each CCP**

   *(SEE PRINCIPLE 3)*

Critical limits must be specified and validated for each Critical Control Point. In some cases more than one critical limit will be elaborated at a particular step. Criteria often used include measurements of temperature, time, moisture level, pH, Asa, available chlorine, and sensory parameters such as visual appearance and texture.

Where HACCP guidance developed by experts has been used to establish the critical limits, care should be taken to ensure that these limits fully apply to the specific operation, product or groups of products under consideration. These critical limits should be measurable.

9. **Establish a monitoring system for each CCP**

   *(SEE PRINCIPLE 4)*

Monitoring is the scheduled measurement or observation of a CCP relative to its critical limits. The monitoring procedures must be able to detect loss of control at the CCP. Further, monitoring should ideally provide this information in time to make adjustments to ensure control of the process to prevent violating the critical limits. Where possible, process adjustments should be made when monitoring results indicate a trend towards loss of control at a CCP. The adjustments should be taken before a deviation occurs. Data derived from monitoring must be evaluated by a designated person with knowledge and authority to carry out corrective actions when indicated. If monitoring is not continuous, then the amount or frequency of monitoring must be sufficient to guarantee the CCP is in

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3 Since the publication of the decision tree by Codex, its use has been implemented many times for training purposes. In many instances, while this tree has been useful to explain the logic and depth of understanding needed to determine CCPs, it is not specific to all food operations, e.g., slaughter, and therefore it should be used in conjunction with professional judgement, and modified in some cases.
control. Most monitoring procedures for CCPs will need to be done rapidly because they relate to online processes and there will not be time for lengthy analytical testing. Physical and chemical measurements are often preferred to microbiological testing because they may be done rapidly and can often indicate the microbiological control of the product.

All records and documents associated with monitoring CCPs must be signed by the person(s) doing the monitoring and by a responsible reviewing official(s) of the company.

10. Establish corrective actions

(SEE PRINCIPLE 5)

Specific corrective actions must be developed for each CCP in the HACCP system in order to deal with deviations when they occur.

The actions must ensure that the CCP has been brought under control. Actions taken must also include proper disposition of the affected product. Deviation and product disposition procedures must be documented in the HACCP record keeping.

11. Establish verification procedures

(SEE PRINCIPLE 6)

Establish procedures for verification. Verification and auditing methods, procedures and tests, including random sampling and analysis, can be used to determine if the HACCP system is working correctly. The frequency of verification should be sufficient to confirm that the HACCP system is working effectively.

Verification should be carried out by someone other than the person who is responsible for performing the monitoring and corrective actions. Where certain verification activities cannot be performed in house, verification should be performed on behalf of the business by external experts or qualified third parties.

Examples of verification activities include:

- Review of the HACCP system and plan and its records;
- Review of deviations and product dispositions;
- Confirmation that CCPs are kept under control.

Where possible, validation activities should include actions to confirm the efficacy of all elements of the HACCP system.

12. Establish Documentation and Record Keeping

(SEE PRINCIPLE 7)

Efficient and accurate record keeping is essential to the application of a HACCP system. HACCP procedures should be documented. Documentation and record keeping should be appropriate to the nature and size of the operation and sufficient to assist the business to verify that the HACCP controls are in place and being maintained. Expertly developed HACCP guidance materials (e.g. sector-specific HACCP guides) may be utilized as part of the documentation, provided that these materials reflect the specific food operations of the business.

Documentation examples are:

- Hazard analysis;
- CCP determination;
Critical limit determination.

Record examples are:

- CCP monitoring activities;
- Deviations and associated corrective actions;
- Verification procedures performed;
- Modifications to the HACCP plan;

An example of a HACCP worksheet for the development of a HACCP plan is attached as Diagram 3.

A simple record-keeping system can be effective and easily communicated to employees. It may be integrated into existing operations and may use existing paperwork, such as delivery invoices and checklists to record, for example, product temperatures.

**TRAINING**

Training of personnel in industry, government and academia in HACCP principles and applications and increasing awareness of consumers are essential elements for the effective implementation of HACCP. As an aid in developing specific training to support a HACCP plan, working instructions and procedures should be developed which define the tasks of the operating personnel to be stationed at each Critical Control Point.

Cooperation between primary producer, industry, trade groups, consumer organisations, and responsible authorities is of vital important. Opportunities should be provided for the joint training of industry and control authorities to encourage and maintain a continuous dialogue and create a climate of understanding in the practical application of HACCP.
DIAGRAM 1

LOGIC SEQUENCE FOR APPLICATION OF HACCP

1. Assemble HACCP Team

2. Describe Product

3. Identify Intended Use

4. Construct Flow Diagram

5. On-site Confirmation of Flow Diagram

6. List all Potential Hazards
   Conduct a Hazard Analysis
   Consider Control Measures

7. Determine CCPs
   See Diagram 2

8. Establish Critical Limits for each CCP

9. Establish a Monitoring System for each CCP

10. Establish Corrective Actions

11. Establish Verification Procedures

12. Establish Documentation and Record Keeping