

# Training Modules for Food Handlers, Of Restaurants in Alappuzha

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**Abstract:** The present project aims to develop training modules to food handlers in restaurants. Though they make a wide variety of tasty food, food safety and health impact due to environmental and other contaminants is very high. The area selected for this study is restaurants in Cherthala in Alappuzha district. Survey (to find out different types of restaurants), and observation checklists (to study handling practices of food handlers) , have been used for collecting data. Three busy places in the area have been selected. From each area four restaurants have been studied in detail. The handling practices at the time of sale, ingredients and utensils used, waste disposal, dish washing ,water storage and food storage, personal hygiene of food handlers restaurants have been studied. The observation checklist restaurants has been filled up. The training module has been prepared based on Codex. A training calendar has been prepared. To improve the general awareness of food handlers, training was conducted in the Municipal Complex. Along with the technical sessions (slide show) they were given a questionnaire to evaluate the effectiveness of the training and to get feedback. The main findings were the wrong handling practices, use of adulterated tea dust, contaminated water, repeated oil use, use of news paper for wrapping. A Training book let was given to the correspondents. After the training, survey was conducted to ensure implementation. The recommendations include Good Hygiene Practices (GHP) directives. The paper recommends that GHP audit must be conducted from time to time .It also recommends Government initiative is highly essential.

**Keywords:** Food Handlers, GHP audit, Cherthala in Alappuzha district.

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## 1. INTRODUCTION

Food quality including safety is a major concern facing the food industries today. Trends in the global food production, processing, distribution and preparation present many challenges to Food Safety. Food grown in one country can now be transported and consumed across the world. People demand a wide variety of foods than in the past. They want foods that are not in season and often eat away from home. With this emphasis on change in food consumption pattern, more pressure is placed on the food processing industry to cater to the public's demand for greater variety of high quality food that has been prepared and cooked safely. The challenge of preparing quality safe food begins with well trained and knowledgeable work force.

The World Health Organization (WHO) considers unsafe food as 'one of the most widespread health problems and an important cause of reduced economic productivity.

In 2005 alone, 18,00,000 people world wide died from diarrhoeal diseases. A large proportion of these can be attributed to contamination of food and drinking water.

WHO reports over 900000 Lakhs Indians die each year from drinking contaminated water and breathing in polluted air.

While most food born diseases are sporadic and often not reported, outbreaks of food borne disease may take one massive proportions.

Series and chronic health effects of food borne illness present a huge burden on the public health care system.

**Food safety** can be defined as the assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use. A preventive approach to food safety ensures that the manufacturers examines every

stage of the process, identify the essential ways to control the food safety hazards and makes sure that the process parameters/control measures remain consistent and effective and the final food product is safe and suitable for human consumption.

Quality and safety of food have to be ensured throughout the food production, processing, storage and distribution chain. Food safety and product quality have always been top priorities for the Food industry. The Food Quality and Safety Committee constantly examine quality and safety issues. The committee also makes recommendations on how to maintain and improve quality and to protect consumers and industry from food safety problems. All food products are coming under increasing scrutiny by government agencies and consumer groups. With the fast growth of the industry comes the increasing risk of contamination from various sources, including unintentional mixing of products with other products or accidental exposure of vegetables to microorganisms, foreign matter or pesticides. Since the product is a RTE process are going to be used as an ingredient in other foods, or consumed directly. By executing and documenting Good Manufacturing Practices (GMPs), processors can assure government regulators and customers worldwide that our industry is diligent in its commitment to processing safe, high-quality products.

Time and inadequate training are cited as reasons why food service workers do not follow safe food handling practices. In the commercial kitchen, there should be no excuse for handling food in an unsafe manner. Workers need to know why food safety is important and the only way to do that is through training. Here are several reasons why it is important to train staff in safe food handling practices:

**The workers are the ones actually handling food.** Since restaurant staff are the ones actually handling and preparing the food, it is important that they do so in a safe manner. This protects both employees and customers from harmful bacteria.

**It is a health code requirement.** Currently, the only restaurant workers who need to be food safety certified are managers, but the FDA Food Code does stipulate that all restaurant staff need to have a working knowledge of food safety. What constitutes "working knowledge" is left up to the local health departments to decide. Chances are the health inspector will ask employees what safety measures they are using and maybe why those measures are important.

**Reduce the risk of food poisoning.** Person-to-person contact is the number 1 method for transfer of harmful bacteria. Workers who are properly trained in safe food handling practices will be less likely to be the source of bacterial contamination.

**Training helps with quality control.** Food safety is a huge part of quality control and less food will be wasted due to spoilage or contamination when staff are properly trained.

**Behaviour will change.** The best way to ingrain proper procedures into people is to change their behaviour. Training and regularly applying those food safety training principles will eventually change the way staff handle and look at food to the extent that safe food handling just becomes second nature.

**Employees can gain a better appreciation for their jobs.** After so long, preparing food in a commercial kitchen can become monotonous, and employees may begin to question why they have to do things a certain way. Food safety training teaches workers why safe food handling is important. Once they realize that they are directly responsible for the health and safety of the customers, their jobs may feel a little less monotonous.

#### **Why Food Safety Training is Important-Need for the study:**

Food borne illness is caused by consuming food or drink that is contaminated by germs. Perhaps the food was not fully cooked or left out at room temperature. Perhaps someone who handled the food was sick or had germs on their hands. Even the simplest errors in food handling can cause someone to get a food borne illness, and when this happens to two or more people, it is called a food borne outbreak.

Educating food handlers is the best way to protect the public, food handlers themselves, and their families. Properly trained food handlers can improve food safety and reduce risks and behaviour commonly associated with food borne illness and outbreaks.

Training helps to promote confidence, increase job satisfaction, improve performance/morale and supervisory skills of managers, generate pride in appearance and practices, develop team spirit, and reduce the amount of supervision required; reducing complaint, increasing job satisfaction and probably reducing staff turnover are equally essential. Training contributes to increase productivity, promotes a good company image as well as ensures that all the correct procedures, including cleaning, are followed so as to comply with any legal provisions or the requirements of industry guides or codes of practice. Through training the food industry will benefit by having available a pool of trained food handlers.

## **OBJECTIVE:**

The objectives of this study include

1. To study the different types of restaurants in the area, infrastructure facility hygiene practices and manufacturing practices
2. To deliver on the spot training to the food handlers of selected restaurants based on the observations.
3. To prepare a training module for food handlers
4. To give general awareness training related to food safety to the employer and the selected employee of production and service in Municipal Complex, Cherthala
5. To Submit recommendations for their improvement to higher authority.

## **2. REVIEW OF LITERATURE**

The Centers for Disease Control and Prevention (CDC) estimate that approximately 76 million cases of food borne illness result in 325,000 hospitalizations and 5,000 deaths annually (Mead et al., 1999). The yearly cost of lost productivity alone is estimated at between \$20 and \$40 billion in the U.S. (FDA, 1997).

Barriers to safe food handling practices for food service establishments are of increasing concern as Americans eat away from home more often. According to the National Restaurant Association (2000), half of all adults are restaurant patrons on a typical day. Moreover, public health officials have predicted that food borne illness may become even more of a problem in the years to come (US-DHHS, 2000).

The FDA's report, *FDA Retail Food Program Database of Foodborne Illness Risk Factors* (2000), presents data to establish a national baseline of foodborne illness risk factors and for measuring the current status of occurrence of these factors. Among the establishments studied were fast food and full-service restaurants. The baseline data collected reflected the Food Code provisions on the occurrence of five risk factors:

- \* Food from unsafe sources
- \* Inadequate cooking
- \* Improper holding temperature
- \* Contaminated equipment
- \* Poor personal hygiene

Each of these issues is addressed in this study's survey. Further, within each of these categories, the FDA recorded "out of compliance" observations of more than 40% in both fast-food and full-service restaurants:

- \* Cold holding at 41 degrees F or below
- \* Ready-to-eat foods held cold at 41 degrees F or below
- \* Commercially processed foods date-marked
- \* Surfaces, utensils cleaned and sanitized
- \* Proper hand washing

### **Food Safety, Labor Market, and Extension Implications:**

Employers understand the positive and necessary value of safety training programs and emphasize training as important employment qualification, but few have hired trained workers. However, these same employers are at least willing to do so and would even be more willing to bring these individuals in at a higher level than pay to for training themselves. If given the choice, most managers would choose training incentives that require no ready outlays of cash payments.

The study discussed sought to better understand both potential problems by enumerating and publicizing the value of specific skills and the overall value of food safety training to the food service industry. The findings provide some support that managers do value food safety training to private managers, in addition to the public benefits defined in the

introduction. Our Extension specialists developed a display and brochure with these findings for distribution at job service offices to assist in recruiting trainees. It is important that they and other Extension personnel continue to have a presence at the statewide meetings where this kind of information can be disseminated to public Workforce personnel.

Based on interviews with workforce centers around the state, however, hiring activity among food managers has been minimal, showing a discrepancy between what employers say and what they may do. This may be explained by the challenges presented by shift work in this industry. Research shows that single mothers have been most likely to take advantage of increased minimum wages and welfare reform (Turner, 2000). Yet, childcare constraints make their availability for food service shifts problematic.

Alternatively, concerns about reliability and "soft work skills" may prevent food service managers from hiring welfare recipients. A National Restaurant Association policy brief (1997) noted that state welfare-reform agencies had only begun to address such key issues as the lack of available childcare, health care, and transportation. Government agencies may be working to match welfare recipients with employers, but those who study welfare reform say government help has traditionally been in short supply once a company actually puts welfare workers on the payroll.

Of more direct relevance to this project, few welfare recipients saw food service as an attractive employment option to aspire to, as evidenced by the lack of interest in food safety training offered through Colorado workforce offices through this project. There was anecdotal evidence that training in hard skills that were perceived to have greater value in the labor market were more likely to draw trainees than food safety skills.

Indirectly, this study found that pre-employment food safety training may not be valued by labor market participants and, instead, that value will be created once a worker is on the job and managers communicate the need for stronger food handling skills. Thus, these findings should motivate Extension personnel to promote the implicit value of food safety training and to find more ways to encourage employers to directly support food safety training through training fees or the pay incentives that they say they are willing to provide. It has been reported that when selecting restaurants, customers increasingly perceived hygiene as a critical determinant (Park et al., 2010) and owners of restaurants highlighted that food quality and hygiene are considered as key factors in the profitability of the food business (Yoon and Moon, 2003). On the other hand the Food Standards Agency (FSA) and Health Protection Agency (HPA) estimated that in England and Wales economic loss due to food-borne diseases amounted to approximately £1.4 billion, with 765,000 cases recorded (FSA, 2006).

Food handler training is seen as one strategy whereby food safety can be increased, offering long-term benefits to the food industry (Smith, 1994). A study to evaluate knowledge, attitudes, and behavior concerning foodborne diseases and food safety issues among food handlers in Italy demonstrated that the level of knowledge was higher among those who attended training courses in food safety (Angelillo, 2000). Effective food safety training involves two stages. Firstly the provision of knowledge in a way that develops understanding and a positive attitude, for example, the importance of hand washing and the knowledge when to wash the hands. In fact, hand washing has proved to reduce contamination significantly (Bidawid et al., 2000) compared to glove wearing where a study has reported that such practice failed to reduce bacterial contamination due to protracted period and complacency (Lynch et al., 2005). However, combining the use of gloves with proper hand washing can reduce the risk of cross contamination (Montville et al., 2001). The second stage involves the implementation of the knowledge by washing the hands properly when required. Practice, motivation and effective supervision, especially coaching, should result in the objective being achieved, i.e. the competency of the food handler and implementation of good practice at all times (Sprenger, 2009).

### **3. METHODOLOGY**

In methodology the paper has clarified the area selected for the study, total number of samples under study and tools / techniques used for study.

#### **Selection of area:**

A survey has been conducted to find out different types of restaurants in Alappuzha. The town of Cherthala, Alappuzha district has been selected for close study. Twelve restaurants in three busy areas have been selected. These are: four each near the railway station, the bus stand, and near Govt. hospital.

#### **Time Period of study:**

One heavy duty hour over a period of one week was selected.

**Tools/techniques primary data collection:**

**Survey:**

A survey was conducted by using a check list to find out different types of restaurants

**Observation check list:**

Personal interview was conducted with selected food handlers .Observation check list was used to collect GMP and GHP Practices. Personal hygiene check list was used to evaluate hygiene practices

**Training & Motivation:**

Based on observation, the wrong practices that they followed were corrected on the spot. A training schedule and a training module was prepared. Training attendance & training feedback form was collected

**Post evaluation-tools:**

After training, the improvement observed in performance, was noted down

## 4. FINDINGS

**Survey-Observation:**

**Different types of restaurants-Table 1**

SI No	Details
1	Restaurants with seating capacity above 50 pax
2	Restaurant associated with resorts
3	Medium type restaurants minimum 20 pax
4	Thattukada
5	Vegetarian and non vegetarian restaurants

**FINDINGS RELATED TO -Good Manufacturing & Hygiene Practices-Table -2**

SI no	Factors considered	Observation	Corrective action
1	Production area-Kitchen, Table top	Area found to be oily	Proper cleaning practices
	Water used	Water is collected for outside microbial analysis	Water is given for out side lab for quality check and found to be contaminated C.A-After training water source is changed, and again water is collected for testing found to be satisfactory
	Water storage tank	Found to be slimy	Cleaning frequency need improvement
	Utensils used for cooking	Not clean, found to be oily some are not of food grade	Cleaning method need improvement, Utensils have to change food grade, change cleaning agent
2	Service area	Unhygienic and pest entry observed	Surrounding area cleaning need improvement, Pest-o-flash at the designated area
	Hygiene of Surrounding area	Not hygienically maintained in all	Need proper care
	Waste disposal	Not proper, Waste removal at definite	Colored waste basket can be used for plastic ,paper etc

		intervals	
	Hand Washing facility	Not properly arranged in all	Need proper arrangement
3	Raw materials purchased from authorized personnel	Raw material purchase not from authorized supplier	Purchase shall be from authorized supplier
4	Quality of raw materials	No quality inspection system observed	Raw material acceptance shall be scored
5	Storage of finished product	Storage rack not clean ,the food items not segregated	Food grade rack with different compartment shall be made
6	Handling practice at the time of service	Bare hand, Handling food and money same time	Reusable gloves with cap neat uniform shall be provided,
7	Oil used for the preparation of snacks	Oil found to be reusing	Oil reuse can be controlled method for that need to be practiced
8	Storage of Perishable food (Milk,meat---)	Not proper	Perishable items has to be controlled
9	Tea leaves	Tea leaves given for testing, Used tea leaves are reusing,	Proper training
10	Sanitation system for		
	Hand washing	Not found in all	To be introduced
	Dish washing	Not found in all	do
	Disinfection of glass/ plate	do	Do
	Utensils washing	Do	do
11	Disposal of waste	Waste segregation and disposal not proper	Proper waste segregation system to be followed
12	Personal Hygiene of Staff	Not up to the standard	To be improved

**TRAINING SCHEDULE-Table-3**

**Date:**

**Place:**

**Name of trainer:**

Sl No	Time	Topic
1	10 am -11 am	Personal hygiene(TM-1)
2	11.15 am-12.30 pm	Food safety in catering operation(TM-2)
3	12.30pm -1.0 pm	Open discussion

**TRAINING MODULE(TM-1)**

#### PERSONAL HYGIENE

Food handlers' personal hygiene practices and cleanliness must minimise the risk of food contamination. Personal hygiene is very important for preventing poisoning and illness

The most important things they need to know are that they must: -

- Keep him/herself clean and hygienic
- Keep the work area clean and hygienic
- Keep the product safe

Do whatever is reasonable to prevent their body, anything from their body or anything they are wearing, coming into contact with food or food contact surfaces;

Do whatever is reasonable to stop unnecessary contact with ready-to-eat food;

Wear clean outer clothing, depending on the type of work they do;

Make sure bandages or dressings on any exposed parts of the body are covered with a waterproof covering;

Do not eat over unprotected food or surfaces likely to come in contact with food;

Do not sneeze, blow or cough over unprotected food or surfaces likely to come into contact with food;

Do not spit, smoke or use tobacco or similar preparations where food is handled; and

Do not urinate or defecate except in a toilet.

#### SOME SPECIAL HAND WASHING RULES FOR FOOD HANDLERS

Food handlers are expected to wash their hands whenever their hands are likely to contaminate food.

This includes washing their hands:

Immediately before working with ready-to-eat food after handling raw food;

Immediately after using the toilet;

Before they start handling food or go back to handling food after other work;

Immediately after smoking, coughing, sneezing, using a handkerchief or disposable tissue, eating, drinking or using tobacco or similar substances; and

After touching their hair, scalp or a body opening.

Hand washing is extremely important when working with food. A suitable flow of water, cleansing agent and separate towel should be readily available.

Hands should be washed at least following these actions: before and after food preparation, before and after using kitchen utensils, after using the toilet, after sneezing, coughing, blowing the nose, smoking, touching the hair or face and emptying bins.

Use the hand washing facilities provided by the business.

Clean their hands thoroughly using soap or other effective means.

Use warm running water.

Dry their hands thoroughly on a single use towel or in another way that is not likely to transfer disease-causing organisms onto the hands.

#### HAND WASHING PROCEDURE

1. Wet hands and apply soap. Rub palms together until soap is bubbly
2. Rub each palm over the back of the other hand
3. Rub between your fingers on each hand
4. Rub backs of fingers (interlocked)
5. Rub around each of your thumbs
6. Rub both palms with finger tips then rinse and dry your hands



#### TRAINING MODULE(TM-2)THEBEST PRACTICE FORFOOD HYGIENE

.Keep the surrounding area, clean

Keep the store rooms clean with proper label on food items

Keep a watch on pest activity and take corrective action immediately

Keep raw materials, chemicals, finished product in separate area

Keep your work place clean

Always enter the kitchen with clean uniform, chapel and after proper hand wash

Waste basket shall be kept clean, waste should be deposited in proper way.

Waste shall be removed from the kitchen time to time

Raw ingredients shall be purchased from approved suppliers

Wash the vegetables with chlorinated water

Use always potable water for cooking

Never use food that has fallen to the floor even if the floor looks clean; the soles of

Shoes can carry millions of harmful bacteria including those from dog faeces!

Do not cook if unwell, have a known infection or have an open and uncovered wound.

The use of a clean and washable apron will help to prevent the cross contamination of bacteria from clothing to food stuff and vice versa.

Best practices include cleaning and tidying as you cook to prevent not just contamination of food items but to avoid accidents.

Clean cupboards, fridges etc. frequently, using a suitable cleansing agent. Surfaces should be wiped down before and after contact with food.

Thoroughly cook meat and never share the surface or utensils used for raw meat or poultry with any other items until it has been thoroughly cleaned and dried.

Jewellery should be removed, especially that with intricate design as these items can be a haven for bacteria which can transfer easily to food or utensils.

Wounds should be covered with a waterproof plaster after being cleaned, preferably a blue colour, as there are no natural food products that are blue, so is the easiest to spot if it becomes loose and falls off.

Check expiry dates of products before using.

Do not share cutlery with others unless washing in between, and never taste from a utensil that is going to be placed back into the food source before it is served.

#### CLEAN THESE ITEMS REGULARLY

Cleaning cloths , Chopping boards and utensils, Toilet seat and flush handle,

Taps ,Kitchen work tops , Door and fridge handles, Light switches ,Telephone hand piece Sink, bath and shower ,

Rubbish bin lid , Water storage containers and filters

#### SAFE COOKING

Store and prepare raw meat, poultry, and seafood away from other foods

Store food in the fridge at 5°C, do not overfill and allow cold air to circulate

Where refrigeration is not possible use food preservatives such as salt or freshly prepare food each day

Prevent food juices from dripping onto other foods

Wash hands after each stage of food preparation and particularly after touching raw meat and poultry

Cut meat and vegetables with separate knives and cutting boards

Don't forget to clean all contaminated items including utensils, cutting boards, and kitchen worktops after using

Soak, scrape, brush, scald, or wash all fruit, salad and vegetables

Always cook all meat products thoroughly at 75°C

Don't leave cooked food sitting at room temperature for longer than two hours

Remember to reheat (at 82°C or above) and re-serve leftovers only once



**SERVICE STAFF**

Remain in a presentable manner.  
 Keep the food items in closed containers  
 Wash your hands regularly  
 Always serve food in hot condition  
 Keep away from guest when you are ill  
 Do not use the same hand for service and for left over

**STANDARD PARAMETERS FOR CATERING OPERATION**

Sl no	Parameter	Standard
1	Receiving temperature	Chilled items below 5 degree centigrade Frozen food below -18 degree centigrade
2	Washing vegetables	50-100 ppm chlorine water
3	Storage temperature of chiller	Below 5 degree centigrade
4	Storage temperature of freezer	Frozen food below -18 degree centigrade
5	Cooking Temperature	Core temperature above 75 degree centigrade
6	Cooling temperature	60 degree centigrade to 21 degree centigrade to 2 hours & 21 to 5 degree to next 4 hours
7	Reheating temperature	82 degree centigrade
8	Danger zone in storage	5 to 60 degree centigrade
9	Buffet holding temperature	Above 60 degree centigrade for minimum 2 hours

**IMPROVEMENT OBSERVED AFTER TRAINING:**

Important change noticed among employees after training include change of attitude towards hygiene practices in their work place. They were highly motivated to work in a systematic way.

**5. RECOMMENDATION**

**Recommendations include:**

1. The food handler shall undergo a food safety training prior to appointment. Assess the food handlers before issuing the certificate in order to evaluate the knowledge retained after the training.
2. Train food handlers according to their need and risk which the food may represent to consumers in terms of food poisoning. Training should be directly related to their daily work activities, including food safety risks associated with the food stuffs that they handle, how it should be stored, handling waste etc
3. Consideration should also be given to training/instruction that may be required for contractors working on your site and staff supplied through employment agencies.
4. The training should develop an understanding what the principles of effective food safety management procedures are, how they are incorporated into working practices and procedures, what the key processes are and how they are implemented within the business. Proper work instructions shall be exhibited in place.
5. Higher authority has to give importance to training and has to give a package and schedule to the restaurants
6. The employer has to give importance to refresher training. A trained employee shall be appointed to train all other employees. This shall be mandatory.
7. The higher authority shall conduct hygiene audit without prior information.

## 6. CONCLUSION

Food handlers are crucial links in the food chain from farm to fork. The safety of our food depends largely on them. However malpractices have been reported on numerous occasions resulting in food poisoning outbreaks. Therefore it is essential that food handlers are properly trained so that they take the necessary precautions to avoid such accidents.

One of the major problems faced by the employer in restaurants include lack of trained man power. The staff working in production and service area may leave their job within short time period. The employer shall take special care to protect a trained employee in terms of incentives or other rewards This will make him happy to remain in his work place for long period .

The restaurant operation in Kerala has got significant improvement after the introduction of Food Safety and Standard Act 2006. But the general hygiene practices have to be improved through training. Continuous training and evaluation based on selected topics by the experts is very essential for innovative change. Government and concerned authority have to take initiatives for the improvement of restaurants in Kerala.

## REFERENCES

- [1] Ansari-Lari M., Soodbakhsh S. and Lakzadeh L., "Knowledge, attitudes and practices of workers on food hygienic practices in meat processing plants in Fars, Iran", Food Control, **21**, 260-263 (2010).
- [2] CAC/RCP 43 R1995 Code of Hygiene Practice For the preparation and sale
- [3] Cuprasitru T., Srisorrachatr S. and Malai D., "Food safety knowledge, attitude and practice of food handlers and microbiological and chemical food quality assessment of for making merit for monks in Ratchathewi District", Asia J. of public health, **2(1)**, 27-34 (2011).
- [4] Eurosurveillance Editorial Team, "The European Union summary report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks in 2010", available at: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20113> (accessed 22 July 2013).
- [5] Greig J.D., Todd E.C.D., Bartleson C.A. and Michaels B.S., "Outbreaks where food workers have been implicated in the spread of foodborne disease. Part1, Description of the problem, methods, and agents involved", J. of Food Prot. Tech., **70(7)**, 1752-1761 (2007).
- [6] Health Statistics Unit, "Health Statistics Report 2011", Ministry of Health and Quality of Life (2012).
- [7] Pajot M. and Aubin L., "Does food handler training improve food safety? A critical appraisal of the literature" (2011), available at: <http://www.peelregion.ca/health/resources/pdf/mandatory-food-handler-training.pdf> (access on 25 July 2013).
- [8] Rennie, D.M., 1994, "Evaluation of food hygiene education", British Food J., **96(11)**, 20-25 (1994).
- [9] Schedule IV in Food Safety Standard Act2006 Rules 2011 Regulations
- [10] Taylor, E., "Is food hygiene training really effective?", Env. Health, 275-276 (1996). 11. World Health Organisation, "Five keys to safer food manual" 2006, available at: [http://www.who.int/foodsafety/publications/consumer/manual\\_keys.pdf](http://www.who.int/foodsafety/publications/consumer/manual_keys.pdf) (accessed 24 July 2013).
- [11] Xavier C.A.C. , Oporto C.F.O., Silva M.P. , Silveira I. A. and Abrantes M.R., "Prevalence of *Staphylococcus aureus* in food handlers from grades schools located in Natal city, RN, Brazil", The Brazilian Magazine of Clinical Analyses, **39(3)**, 165-168 (2007).