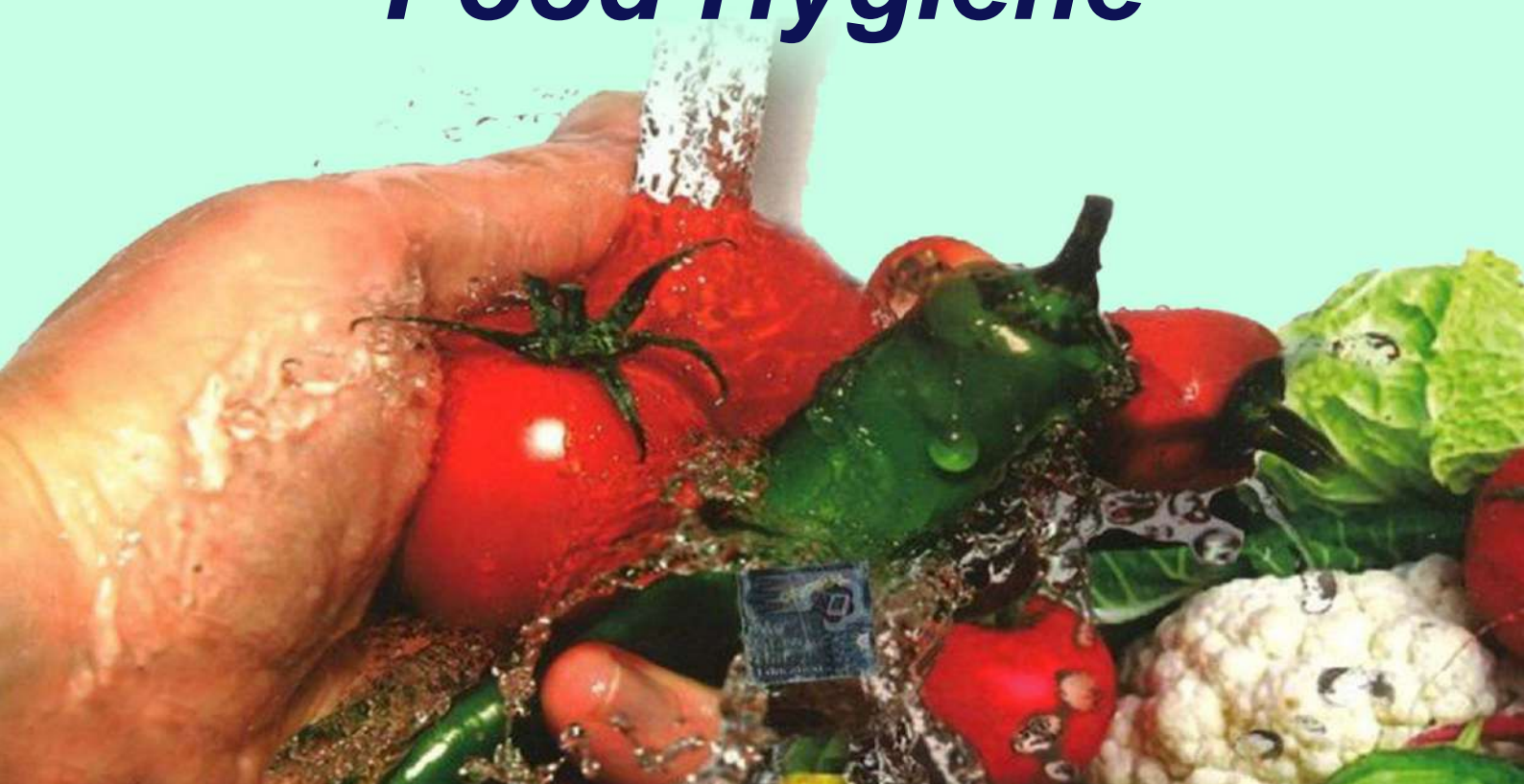




Food Safety & Food Hygiene





Dr. Sundar Kataria,
CMD

FSMS – ISO 22000

It is a Global Village now and traveling has increased a lot across the world. Eating habits of people have changed tremendously. People want more and more exotic foods and different cuisines from various countries. In the past there were very few earning members and many depending upon one, whereas today both the husband and wife are working therefore they are dependent upon outside as well as fast food. Ready to serve meals come to age with state of art. Consumption of food has increased due to increase of population with intense farming and modern processing and preservation of food.

Thanks to the information technology and digital marketing; food from all over the world is available today on our finger tips.

Hence the food safety and food hygiene plays a very important role. That is the reason the International Food Safety Management System is a harmonized standard need of the day to have uniform and minimum food safety standards acceptable globally so as to have free trade across the countries / globally.

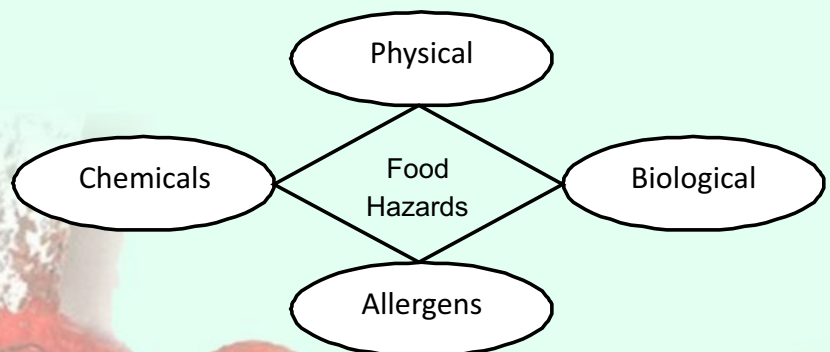
International Organization for Standardization, ISO adopted the HACCP Management System which has been upgraded to ISO 22000:2018 which is accepted by more than 200 countries and adopted by 100 countries worldwide.

The food industry and its establishment have to assure that the food will not cause any harm to the consumer when prepared and/or eaten according to its intended use. The HACCP – Hazard Analysis is conducted to identify various types of food hazards to know control points and critical control points including preventing food safety errors.

ISO 22000 is based on HACCP principles by taking preliminary steps given as under 12 steps included in the HACCP system are :

1. Assemble HACCP Team
2. Product Description
3. Identify intended use
4. Construct flow diagram
5. Verification of process (Flow diagram)
6. Identify potential hazards
7. Identify CCP
8. Establish Critical limit
9. Design CCP monitoring
10. Corrective Action
11. Verification & Validation
12. Record keeping

The Basic hazards are



There are 10 clauses of ISO 22000:2018 based on “High Level Structure” 3 general and 7 main clauses

General Clauses

1. Scope
2. Normative reference
3. Terms & Definitions

Main Clauses

4. Context of the organization
5. Leadership
6. Planning
7. Support
8. Operation
9. Performance on evaluation
10. Improvements

Primarily Elements and Principles of FSMS, ISO 22000 is simply focusing on the aspects of management system radically covering

- Management System
- Pre-requisite program
- HACCP (Risk Approach)
- Focusing customer and all related interested parties
- Leadership, communication & people engagement
- UBC Process approach
- Continuous improvement
- OPRP – Operational control
- Competent manpower (training & qualification)

- New standard is user friendly requires minimum documentation like
- Food Safety Manual (FSMS Policy, Objectives, Organization, Processes, Responsibility etc)
- HACCP Analysis, CPs and CCPs
- OPRPs/PRPs
- Food Safety Manager Functions (Internal Audit, MRM, Corrective Action, Preventative action, Documentation and reporting)
- Supervision and Monitoring
- Infrastructure & Facility
- Support services etc.

What benefits we will get in adopting ISO 22000:

- Applicable to whole food chain Improve on traditional approaches to food safety controls
- Identify hazards conceivable mitigations to acceptable limit hazards
- Continuous improvements – adopting changes
- Manage resources – critical food operation
- Help in International trade and reduce liability
- Better customer satisfaction
- Brand Equity



Yashi Shrivastava,
FSSAI Trainer,
Auditor

Food Safety & Food Hazards

a) Food Safety:

Food Safety means assurance that food is acceptable for human consumption according to its intended use. Food Safety refers to handling, preparing and storing food in a way to best reduce the risk of individuals becoming sick from food borne illnesses. Food safety is a global concern that covers a variety of different areas of everyday life.

b) Food Safety Aim:

The principles of food safety aim to prevent food from becoming contaminated and causing food poisoning. This is achieved through a variety of different avenues, some of which are:

- a. Properly cleaning and sanitizing all surfaces, equipment and utensils
- b. Maintaining a high level of personal hygiene, especially hand-washing
- c. Storing, chilling and heating food correctly with regards to temperature, environment and equipment.
- d. implementing effective pest control

c) Food Safety in India:

Last few decades not only witnessed a change in our eating habits but how we store and consume food has also gone through a transformation. Rise in population and urbanization has led to an increased demand for packaged food. With the increase in working population, the need for on-the-go consumption has only gone up. At the same time, awareness about nutrition and health has become much stronger and penetrated deep into Indian consumers' minds. On the regulatory side, Food Safety and Standard Authority of India (FSSAI) has been spreading awareness about issues related to food safety across the country, while also strengthening legislation to ensure that only safe food is made available to consumers, both by the producer as well as the industry.

The unsafe food creates a vicious cycle of disease and malnutrition which affect all age groups but in particular children, the elderly, and the sick. Foodborne diseases are important hidden causes of morbidity. Though most of the foods borne diseases are sporadic and often not reported in India, a nationwide study reported an alarming

The unsafe food creates a vicious cycle of disease and malnutrition which affect all age groups but in particular children, the elderly, and the sick. Foodborne diseases are important hidden causes of morbidity. Though most of the foods borne diseases are sporadic and often not reported in India, a nationwide study reported an alarming

13.2% prevalence at the household level. Currently, the mainstay for food safety in India is a legislative approach. The Indian food industry is regulated by the number of legislations covering sanitation, licensing, and permits.

d) Food Supplies Include

- | | |
|----------------------|-------------------------|
| a. Milling | n. Fruits and Vegetable |
| b. Bakery | o. Jam and Jelly |
| c. Fish and Sea Food | p. Frozen Product |
| d. Dates | q. Confectionery |
| e. Poultry | r. Ice cream |
| f. Nuts, Peanut | s. Snack Food |
| g. Soyabean | t. Oil, Ghee, Fat |
| h. Dairy Product | u. Sugar |
| i. Snack Food | v. Honey |
| j. Beverages | w. Tea |
| k. Grains | x. Manufacturing |
| l. Ice and Water | y. Repackaging |
| m. Egg | z. Trading |

e) Food Safety Hazards

Food Safety Hazard means agent in food, or condition of food, with the potential to cause an adverse health effect.

There are four major types of hazards:

a) Allergens:

Food allergens are typically naturally-occurring proteins in foods or derivatives of them that cause abnormal immune responses.



b) Biological Hazards:

A general definition of a hazard as related to food safety is conditions or contaminants that can cause illness or injury. Biological hazards include microorganisms such as bacteria, viruses, yeasts, molds and parasites. Some of these are pathogens or may produce toxins. E-coli are mostly harmless bacteria that live in the intestines of people and animals and contribute to intestinal health. However, eating or drinking food or water contaminated with certain types of E. coli can cause mild to severe gastrointestinal illness.



Biological Hazards causes:

Food Borne Infections – This result when a person consumes food containing pathogens; which grow in the human intestine and cause discomfort or disease. Typical symptoms of a ‘food borne Infections’ do not appear immediately.

Food Borne Intoxications: This result when a person consumes food containing toxins in it; that cause discomfort or disease. Typical symptoms of a ‘food borne Intoxication’ appear quickly. Food Borne toxin are mediated infections,

that result when a person consumes food containing toxins produced by the pathogens in it; which grow in the human intestine and produce toxins that cause discomfort or disease.

c) Chemical Hazards:

Naturally occurring and process induced chemical substances that can cause a food borne illness are called a 'Chemical Contaminant or Hazard'.

Natural Chemical Contaminants include:

1. Biological toxins
2. Mycotoxins (aflatoxin, ochratoxin etc.)

Process Induced Chemical Contaminants include:

1. Toxic metals in the processing set up or supply chain
2. Pesticides, Colorants
3. Cleansing products and sanitizers
4. Equipment lubricants
5. Chemical Food Additives, Preservatives
6. Packaging materials-migration of residues from packaging material to oil.
7. Adulteration with other oils or mineral oil



d) Physical Hazards:

Any foreign object (inanimate) found in the food or a naturally occurring object (metal, hard plastic), that poses a hazard is called a 'Physical Contamination or Hazard'.



Common Physical Hazards include:

- Glass
- Chipped pieces from equipment
- Metal shavings from equipment's, cans, foils etc.
- Stapler pins
- Blades
- Plastic or chipped pieces of disposables
- Lint and threads
- Band- aids
- Hair
- Finger nails
- Jewellery pieces



Sumit Saxena,
FSSAI Auditor

Challenges of Food Processing Industry in selection of Location, Layout and Facilities

The food processing industry is a subset of the manufacturing sector with unique challenges. Among these, ensuring food hygiene and preventing contamination are two issues of prime importance. Hence, designers have to overcome such challenges when designing facilities suitable for food processing.

1. Construction and Layout:

Buildings shall be designed, constructed and maintained in a manner appropriate to the nature of the processing operations to be carried out, the food safety hazards associated with those operations and the potential sources of contamination from the plant environs. Buildings shall be of durable construction which presents no hazard to the product.

NOTE: An example of “durable construction” is self-draining roofs which do not leak.

a) Environment:

Consideration shall be given to potential sources of contamination from the local environment. Food production should not be carried out in areas where potentially harmful substances could enter the product. The effectiveness of measures taken to protect against potential contaminants shall be periodically reviewed.



b) Location of Establishments:

The site boundaries shall be clearly identified. Access to the site shall be controlled. The site shall be maintained in good order. Vegetation shall be tended or removed. Roads, yards and parking areas shall be drained to prevent standing water and shall be maintained.



2. Layout of premises and workspace :

Internal layouts shall be designed, constructed and maintained to facilitate good hygiene and manufacturing practices. The movement patterns of materials, products and people, and the layout of equipment, shall be designed to protect against potential contamination sources.

a) Internal design, layout and traffic patterns

- I. Adequate Space
- ii. Unilateral Flow

b) Internal structures and fittings

c) Location of equipment

d) Laboratory facilities

e) Temporary or mobile premises and vending machines

- I. Prevention of Cross-Contamination
- ii. Avoid Pest Harborage

f) Storage of food, packaging materials, ingredients and non-food chemicals

- I. Prevention of Cross-Contamination
- ii. Avoid Pest Harborage
- iii. Allow Segregation



g) Premises and Layout (Failures!)

- i. Failure to plan for extension / expansion
- ii. Failure to plan Men and Material Traffic adequately
- iii. Situations of Urgency / Heavy movement
- iv. Missing out the Legal Requirements
- v. Inadequate Utility - Waste Management / Cleaning / Recall-Reject
- vi. Improper Ventilation
- vii. No Division between Wet and Dry Areas
- viii. Sequencing the execution of plan
- ix. Vendor Coordination
- x. Outside road damage and stagnation



3. Utilities - air, water, energy:

The provision and distribution routes for utilities to and around processing and storage areas shall be designed to minimize the risk of product contamination. Utilities' quality shall be monitored to minimize product contamination risk.

i. Water supply

1. Potable
2. Identified

ii. Air quality and ventilation

1. Flow
2. Control
3. Maintenance

iii. Compressed air and other gases

1. Filtration
2. No Cross
3. Food Grade

iv. Lighting

1. Fixtures
2. Illumination

v. Lighting

- Lux level requirement

a) Utilities (Failures!)

- i. Inadequate Water Treatment
- ii. Water Pipelines (Supply, Cladding, Condensate, Sequence)
- iii. Contamination in Air Supply to Air Locks (Pneumatic System)
- iv. Non Certified Gases for Food Contact
- v. Illumination:
- vi. No knowledge of requirement
- vii. No Assessment for darker times of shift
- viii. Not assessing light absorbing infrastructural components



4. Waste Disposal:

Systems shall be in place to ensure that waste materials are identified, collected, removed and disposed of in a manner which prevents contamination of products or production areas.

a) Containers for waste and inedible or hazardous substances

- i. Clearly identified for their intended purpose;
- ii. Located in a designated area;
- iii. Constructed of impervious material
- iv. Readily cleaned and sanitized;
- v. Closed when not in immediate use;
- vi. Locked where the waste may pose a risk to the product.



b) Waste management and removal

- I. Segregation, storage and removal of waste.
- ii. No Accumulation
- iii. High removal frequencies, with a minimum of daily
- iv. Ensure that trademarks cannot be reused.
- v. Removal and destruction shall be carried out by approved disposal contractors. The organization shall retain records of destruction.



c) Drains and drainage

- I. Sufficient Capacity / Adequate Design / Drainage direction



d) Waste Management (Failures!)

- I. Improper Indenting (Types and No.)
- ii. Improper Training of Segregation
- iii. Incorrect locations
- iv. Incorrect size and material
- v. Not following the EPCB requirements (ETP / Oil Waste / Wet Waste Cold Rooms)

5. Equipment suitability, cleaning and maintenance:

Food contact equipment shall be designed and constructed to facilitate cleaning, disinfection and maintenance.

Contact surfaces shall not affect, or be affected by, the intended product or cleaning system.

Food contact equipment shall be constructed of durable materials able to resist repeated cleaning.



a) Hygienic design

- I. Smooth, accessible, cleanable surfaces, self-draining
- ii. Use of materials compatible with products and cleaning or agents;
- iii. Framework not penetrated by holes or nuts and bolts.
- iv. Piping and duct work cleanable, drainable, and with no dead ends.
- v. Designed to minimize contact between the hands and the products.

b) Product contact surfaces

- I. Impermeable / Corrosion free.

c) Temperature control and monitoring equipment

- I. Shall be able to meet the temperature gradient and holding
- ii. Monitoring and control of the temperature.



d) Cleaning plant, utensils and equipment

- I. Cleaning Programmers

e) Preventive and corrective maintenance

- I. A preventive maintenance programme shall be in place.
 - ii. Prevent Contamination / Lubricants - heat transfer fluids food grade
- Maintenance personnel shall be trained in the product hazards

f) Equipment (Failures!)

- I. Incorrect Commissioning – No space / No breathing / No load check
- ii. No work Instructions
- iii. No future arrangements for repair-work or preventive maintenance
- iv. No display of process parameters
- v. Cleaning Procedures
- vi. Process-Owners not trained by Manufacturing-Company Engineers
- vii. MoC Certificates not obtained



6. Personnel hygiene and employee facilities:

Requirements for personal hygiene and behaviors proportional to the hazard posed to the process area or product shall be established and documented. All personnel, visitors and contractors shall be required to comply with the documented requirements.

a) Personnel hygiene facilities and toilets

- i. Lockers
- ii. Hand-Washing / Toilets
- iii. Not open to Production Areas



b) Staff canteens and designated eating areas

- i. Work wear and protective clothing
- ii. Uniforms & PPE
- iii. Laundry
- iv. Food Grade gloves / Enclosed Shoes

c) Illness and injuries

- i. First Aid

d) Personal behavior

- i. Policy and Posters



e) Personal Facilities (Failures!)

- i. Inadequate No. of Washrooms and separate not available
- ii. Lack of knowledge of adequate hand washing facilities
- iii. Uncomfortable / Inconvenient gear
- iv. No provision of prevention from cross contamination
- v. Improper Screening / Monitoring (tobacco pouches)
- vi. Incorrect practices like washing own utensils / uniform oneself
- vii. Inaccessible or Insufficient First Aid Boxes / Incompetent First Aiders
- viii. Lack of knowledge of types of gloves and their respective uses



Stress Buster Zone

4 Looks to Always Remember

1. Look back and get Experience
2. Look forward and see Hope
3. Look around and find Reality
4. Look within and find confidence

Baniya ne Sheikh ko khon de ke uski
jaan bachai
Sheikh ne usse MERCEDEZ gift kardi
Sheikh ko phir khon ki zarurat padi,
Baniya ne phir khon dia.
Ab ki baar Sheik ne till ke
laddu gift kiye
Baniya gusse se kehne laga
MERCEDEZ kyu nahi di ?
Sheikh bola Munna....!!
Ab hamare mei bhi
baniya ka khon daud raha hai

Mobile Funda

Life before marriage is Airtel
" You can express yourself " After Marriage Life is Reliance
" Always get in touch "
After Honeymoon is Hutch
" Wherever you go your wife network follows
" After 1 year life is Idea " Your wife can change your life "
After 10 years life is BSNL
" Subscriber is not reachable. "

Baniya called a newspaper office and asked
"Mere Chachi Mar Gaye Hai, Kya Charges honge ?
Newspaper Person : Rs. 50 per word.
Baniya : Oh bahot jyada hai. Acha likho " Chacha Guzar Gaye"
Newspaper Person : Sir ! It should be minimum 6 words !!
Baniya : Oh ho ! Jara sochne doh.....Acha Likho.....
Chacha Guzar Gaye - Maruti For Sale...

New ICS Employees

Sr. No.	Emp. Name	Emp. Code	Date of Joining	Station	Role
1	Ashwani Verma	ICS/4541	1-Jan-22	Pune	Dy.Surveyor
2	Heet Laljibhai Pandav	ICS/4546	1-Jan-22	ICS-GGL-ZONE-1	Dy.Surveyor
3	Nilabh Sureshkumar Prajapati	ICS/4548	1-Jan-22	ICS-GGL-ZONE-1	Dy.Surveyor
4	Satyam Kumar	ICS/4540	1-Jan-22	Pune	Dy.Surveyor
5	Akash Kumar Sharma	ICS/4545	3-Jan-22	ICS-Torrent Gas	Surveyor
6	Anand Kumar Yadav	ECD/4551	3-Jan-22	ECD-Gail Maharashtra	
7	Bablu Mourya	ICS/4543	3-Jan-22	ICS-Torrent Gas	Dy.Surveyor
8	E. Karthikeyan	ICS/4542	4-Jan-22	ICS-Torrent Gas	Jr. Surveyor
9	Mahendra Lodhi	ICS/4553	4-Jan-22	ICS-MNGL Ramanagara	
10	Pradip Ashok More	AAA/4549	4-Jan-22	Ausadha	
11	Shubham Ravindra Landge	ICS/4550	6-Jan-22	Pune	
12	Sulav Kumar Singh	ICS/4544	6-Jan-22	ICS-GGL-ZONE-7-MP	Surveyor
13	Vijay Mahendra Pal	ICS/4547	6-Jan-22	ICS-VENDOR	Surveyor

Birthdays...

Sr. No.	Emp. Name	Station	Role	Birth Date
1	Ankesh Kumar	Mumbai - ECD	Sr. Office Executive	1st Jan
2	Ajay Kumar Vishwakarma	ICS GGL Zone- 3	Dy. Surveyor	2nd Jan
3	Mohini Mhade	Mumbai-Admin	Office Executive	2nd Jan
4	Debendra Nath Das	ICS - Technology	Dy. Surveyor	3rd Jan
5	Ajay Banwari Kajania	Mumbai-Marketing	Executive	6th Jan
6	Ravi Kumar Gupta	Mumbai - IT	Manager	8th Jan
7	Vijay Vishwakarma	ICS - ONGC - Uran	Surveyor	10th Jan
8	Harish Chander Sachdeva	Mumbai	Ex. Director	15th Jan
9	Ismail Md. Hussain Siddhiqui	Mumbai - Admin	Sr. Office Executive	20th Jan
10	Mohamed Yusuf Shaikh	Mumbai-Insp Cell	Sr. Surveyor	20th Jan
11	Rajshree Sawant	Mumbai - Technology	Sr. Executive	23th Jan
12	Manasi Chalke	Mumbai - Admin	Jr. HR Executive	26th Jan
13	Nadeem Ahmad Khan	Mumbai - Admin	Sr. HR Executive	31st Jan

Sat-Gun-Sang Meet



ATMAVIBHAR BHARAT
SAT - GUN - SANG - MEET
(62nd Virtual Webinar)

**FOOD HYGIENE AND FOOD SAFETY SERIES
PEST CONTROL**

Date : Saturday, 22nd January, 2022
Time : 11:00am to 12:30pm (IST)
9:30am to 11:00am (GST)

Speaker : Mr. Sumit Saxena
(Head Of Global Operations, Miven Quality Assurance Counsel)

- Post Control
- Monitoring & Detection
- Major Pests

Panel Discussion Followed by Questions & Answer Session

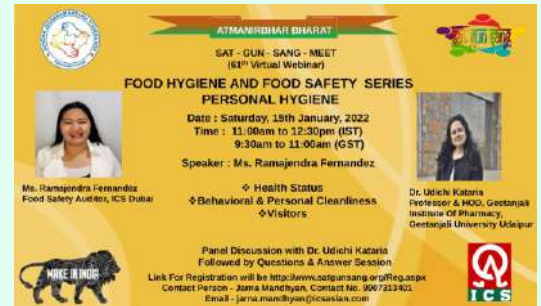
Link For Registration will be <http://www.satgunsang.org/Reg.aspx>
Contact Person - Jarna Mandhyam, Contact No. 9967913401
Email - jarna.mandhyam@icsasia.com

Sat-Gun-Sang is brain child of Dr. Sundar Kataria, Chairman and managing director of ICS, where he was looking for a common platform for sharing acquired knowledge by various quality stalwarts, quality controllers, quality managers, clients and even by common man.

ICS is main propeller behind this initiative in association with SJK Foundation - a charitable trust and its knowledge partner ICS Technologies. Till date we have organized various knowledge sharing drives in the form of awareness programme, experience sharing and problem solving workshops of various quality related subjects.

Since 13th November 2020 we have conducted more than 60 seminars including panel discussion, back to back every Saturday on various quality management topics and series by prominent speakers having industrial exposure in various fields from all over India. We have covered a series of 18 seminars on ISO 9001:2015 **Quality Management Made Easy-90 Series For MSME towards business growth, sustainability & continuity and currently doing a series on Food Safety and Food Hygiene** on every Saturday at 11.00am (IST) and 9:30am (GST)

After completing **Food Safety and Food Hygiene** we shall be doing series on **Occupational Health and Safety for MSMEs, and Inspection and Testing.**



ATMAVIBHAR BHARAT
SAT - GUN - SANG - MEET
(61st Virtual Webinar)

**FOOD HYGIENE AND FOOD SAFETY SERIES
PERSONAL HYGIENE**

Date : Saturday, 19th January, 2022
Time : 11:00am to 12:30pm (IST)
9:30am to 11:00am (GST)

Speaker : Ms. Ramajendra Fernandez

- Health Status
- Behavioral & Personal Cleanliness
- Visitors

Panel Discussion with Dr. Uditchi Kataria
Followed by Questions & Answer Session

Link For Registration will be <http://www.satgunsang.org/Reg.aspx>
Contact Person - Jarna Mandhyam, Contact No. 9967913401
Email - jarna.mandhyam@icsasia.com

Training Calendar

Sr. No	Date	Course Name	Timings
1	24th to 27th January 2022	Internal Auditor Training for Integrated Management System (IMS) covering: 1) Quality Management System (ISO 9001:2015) 2) Environmental Management System(ISO 14001:2015) 3) Occupational Health and Safety Management System (45001:2018)	9.30am to 5.30pm
2	11th Feb 2022	Effectual Business Correspondence Webinar	2.30pm to 4.30pm
3	14th to 18th Feb 2022	Lead Auditor training for ISO 27001:2013	9.30am to 5.30pm
4	24th & 25th Feb 2022	Internal Auditor Training for ISO 13485:2016	9.30am to 5.30pm

Christmas Celebration



Please send us your valuable comments & suggestions on suggestions@icsasian.com. To subscribe for a free Subscription send us a mail with subject "Subscribe for QUALITYMANTRA" at suggestions@icsasian.com

Be a part of the Publication, Share your Ideas, thoughts, Vision and Knowledge, Join us in our mission of a Quality World. Please send your article in 300-500 words with your name and photograph to quality.mantra@icsasian.com.

This Edition Compiled and Presented by ICS Corporate Office Team

International Certification Services Pvt. Ltd.

Corporate Office

22/23 Goodwill Premises, Swastik Estate, 178 CST Road, Kalina, Santacruz (E),
Mumbai- 400 098. Maharashtra, INDIA.

Tel: 022-26507777-82, 42200900, 30608900- 4, Email: info@icspl.org / Web: www.icspl.org

BRANCH OFFICE

*Ahmedabad * Bangalore* Baroda* Belgaum *Chennai*Gandhidham* Hyderabad *Indore* Jaipur*
*Kanpur * Ludhiana* Mumbai* Dombivali* Nagpur* Nasik* New Delhi* Pune*
Surat Udaipur* Vapi*

OVERSEAS OFFICE

*Dubai(UAE) *Nepal* Oman* Qatar* SriLanka* Uganda* USA*

Web : www.icsasian.com / www.icspl.org

Disclaimer: This e-Magazine / publication is for internal circulation only. While every effort has been made to ensure that information is correct at the time of going to print International Certification Services Pvt. Ltd. cannot be held responsible for the outcome of any action or decision based on the information contained in this publication / website. The publishers do not give any warranty for article's written by various author's for the completeness or accuracy for their publication's content, explanation or opinion.

ICS Group Companies

