







Model Curriculum

QP Name: Supervisor- Food Processing Industries

QP Code: FIC/Q9009

QP Version: 1.0

NSQF Level: 5

Model Curriculum Version: 1.0

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Training Parameters

Sector	Food Processing
Sub-Sector	Generic
Occupation	Production
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ NIL
Minimum Educational Qualification and Experience	1. Completed 2nd year diploma after 12th OR 2. 12th grade pass with 2-year NTC/ CITS/NAC and 1 year of relevant experience OR 3. 12th Grade pass with 3-year relevant experience OR 4. Previous relevant qualification of NSQF Level 5 with 1.5 year relevant experience OR 5. Previous relevant qualification of NSQF Level 4 with 3 years of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	20 years
Last Reviewed On	17/11/2022
Next Review Date	17/11/2025
NSQC Approval Date	17/11/2022
QP Version	1.0
Model Curriculum Creation Date	15/10/2022
Model Curriculum Valid Up to Date	17/11/2025
Model Curriculum Version	1.0
Minimum Duration of the Course	570 Hours
Maximum Duration of the Course	570 Hours







Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner will be able to:

- Apply proper process to ensure preparedness for production
- Employ appropriate practices to supervise the production of food processing unit
- Follow standard procedures to ensure food safety
- Apply necessary health and safety practices to ensure workplace health and safety
- Work effectively with others
- Use resources at the workplace optimally

Compulsory Modules

The table lists the modules, their duration and mode of delivery.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
FIC/N1026- Ensure Preparedness for Production NOS Version No. 1.0	20:00	40:00	00:00	00:00	60:00
NSQF Level 5					
Module 2: Ensure Preparedness for Production	20:00	40:00	00:00	00:00	60:00
FIC/N9029- Supervise the operations at food processing unit	60:00	60:00	120:00	00:00	240:00
NOS Version No. 1.0					
NSQF Level 5					
Module 1: Introduction to Food Processing Sector and the Job role	10:00	00:00	00:00	00:00	10:00
Module 3: Supervise food processing unit operations	50:00	60:00	120:00	00:00	230:00
FIC/N9005 Evaluate and develop entrepreneur skills	20:00	40:00	00:00	00:00	60:00
NOS Version No. 1.0					
NSQF Level 5					
Module 4: Evaluate and develop entrepreneurship skills	20:00	40:00	00:00	00:00	60:00
FIC/N9904 – Ensure Food Safety at the Workplace	10:00	20:00	00:00	00:00	30:00







NOS Version No. 1.0					
NSQF Level 5					
Module 5: Basic Food Safety Standards	10:00	20:00	00:00	00:00	30:00
FIC/N9903 – Ensure Workplace Health and Safety	10:00	20:00	00:00	00:00	30:00
NOS Version No. 1.0					
NSQF Level 5					
Module 6: Follow Preventive	04:00	08:00	00:00	00:00	12:00
Measures to avoid Accidents					
Module 7: Manage Workplace Emergencies	04:00	08:00	00:00	00:00	12:00
Module 8: Manage Infection Control	02:00	04:00	00:00	00:00	06:00
DGT/VSQ/N0102 Employability	24:00	36:00	00:00Hours	00:00Hours	60:00
Skills	Hours	Hours			Hours
NOS Version No.: 1.0					
NSQF Level: 4					
Module 9: Employability	24:00	36:00	00:00Hours	00:00Hours	60:00
skills	Hours	Hours			Hours
Total Duration	144:00	216:00	120:00	00:00	480:00







The table lists the elective modules, their duration and mode of delivery.

Elective 1:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
FIC/N5021- Supervise the Production of Bakery Products	30:00	60:00	00:00	00:00	90:00
NOS Version No. 1.0 NSQF Level 5					
Module 10: Monitor the Production of Bakery Products	10:00	20:00	00:00	00:00	30:00
Module 11: Perform Pre- Packaging Activities	10:00	20:00	00:00	00:00	30:00
Module 12: Perform Post-Production Activities	10:00	20:00	00:00	00:00	30:00
Total Duration	30:00	60:00	00:00	00:00	90:00

Elective 2:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
FIC/N0133: Supervise Production of Fruit and Vegetable Products NOS Version No. 2.0	30:00	60:00	00:00	00:00	90:00
NSQF Level 5					
Module 13: Supervise the Production of Fruit and Vegetable Products	15:00	30:00	00:00	00:00	45:00
Module 14: Perform Post-Production Activities and Maintenance of the Records	15:00	30:00	00:00	00:00	45:00
Total Duration	30:00	60:00	00:00	00:00	90:00







Elective 3:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
FIC/N2030: Supervise the production of dairy products NOS Version No. 1.0 NSQF Level 5	30:00	60:00	00:00	00:00	90:00
Module 15: Prepare and maintain work area and process machineries for production of dairy products	15:00	30:00	00:00	00:00	45:00
Module 16: Supervise production of dairy products	15:00	30:00	00:00	00:00	45:00
Total Duration	30:00	60:00	00:00	00:00	90:00

Elective 4:

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
FIC/N3023: Supervise the production of meat and poultry products NOS Version No. 1.0 NSQF Level 5	30:00	60:00	00:00	00:00	90:00
Module 17: Prepare and Maintain Work Area and Process Machineries for Meat & Poultry Processing	15:00	30:00	00:00	00:00	45:00
Module 18: Supervise meat and poultry processing operations	15:00	30:00	00:00	00:00	45:00
Total Duration	30:00	60:00	00:00	00:00	90:00







Module Details

Module 1: Introduction to Food Processing Sector and the Job role *Mapped to FIC/N9029, v 1.0*

Terminal Outcomes:

- Describe the food processing industry and its sub-sectors in brief
- Discuss the roles and responsibilities of a Supervisor –Food Processing Industries

Duration : 10:00	Duration : <i>00:00</i>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss about the food processing industry and its various sub-sector in brief Discuss the career opportunities available to a Supervisor –Food Processing Industries Explain the terminologies used in the food processing process List the sequence of operations to be performed in the job Discuss the future of food processing industry in India 	
Classroom Aids	1
Whiteboard, Flip Chart, Markers, Duster, Project	or, Laptop with charger, Projector screen, Power
Point Presentation, External Speakers.	
Tools, Equipment and Other Requirements	

NA







Module 2: Ensure Preparedness for Production *Mapped to FIC/N1026, v 1.0*

Terminal Outcomes:

- Apply proper practices to prioritize tasks as per work schedule and production requirements
- Role play on how to provide information such as work requirements to the team and address their needs and queries
- Describe methods of identifying work requirements for production through relevant sources, like process flow charts, product recipes, production orders, etc.
- Employ proper methods to manage the new/existing work requirements and provide adjustment as per process demand

as per process demand				
Duration: 20:00	Duration: 40:00			
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes			
 Discuss standard processes and procedures at the workplace, applicable food safety standards and regulations (as per FSSAI) and legal regulations pertaining to the workplace Discuss different information to be obtained before commencement of work and while planning, directing, and coordinating all work activities and resources necessary for the smooth operation Describe methods of identifying work requirements for production through relevant sources, like process flow charts, product recipes, production orders, etc. Explain methods of estimating manpower and material requirements as per production need and the significance of their availability to carry out production Discuss potential food safety risks and control procedures associated with selection and preparation of raw materials Explain processes such as procurement, store management, quality management and key contact points for query resolution and strategies to ensure production goals and standards are met at minimal manufacturing costs State the significance of planning and ensuring capacity utilization of machinery concerning the processing time, production order and batch size 	 Apply proper practices to prioritize tasks as per work schedule and production requirements Role play on how to provide information such as work requirements to the team and address their needs and queries Show how to inspect the work area to ensure it is clean and free from hazardous materials, wastes, etc. Apply standard procedures to dispose of waste and hazardous material at the workplace Demonstrate calibration procedures of the relevant equipment Employ appropriate procedures to receive and organize production materials like raw material, packaging material etc. Apply appropriate supervisory techniques for bulk handling of production materials Show how to verify the received materials are intact and approved by the quality department Dramatize a situation to allot responsibilities/work to the assistants, operators, and helpers and confirm they have understood the tasks to be carried out 			







for each product

- Discuss the importance of cleaning, ensuring suitability and proper organisation of tools and equipment for use and following supplier/ manufacturer instructions related to production machinery
- Elaborate on the various food safety risks involved in bulk handling, receiving and storage of raw materials
- Describe the standard methods of recording, reporting and communication

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Required Sources, like process flow chart, product recipes, production orders, production targets, manpower, equipment and utilities requirements etc., Various raw materials, packaging materials, tools, equipment and other utilities







Module 3: Supervise food processing unit operations *Mapped to FIC/N9029, v 1.0*

Terminal Outcomes:

- Describe operating procedure of the machine and equipment used for manufacturing products
- Apply proper techniques for evaluation of the food processing process at various stages

Duration: 50:00	Duration : 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Outline the standard policies on reporting and documentation, product processes, food safety, etc. Discuss various tools, equipment and machinery used in production along with their operating procedures State the significance of ensuring effective working of tools, equipment and machinery for production Discuss various types of raw materials, ingredients, finished products, and packaging material required for food processing operations Explain methods to inspect production process Discuss effective techniques used for the evaluation of the food processing process at various stages 	 Show how to ensure the cleanliness and sterilization of equipment and machineries as per SOP Demonstrate the use of PPE appropriate for specific tasks and work conditions Demonstrate techniques of labelling, segregation and disposal of waste Demonstrate the pre-production and post-production activities performed in food processing unit Show how to check the controls of food processing machine
Classroom Aids	

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Personal Protection Equipment: Safety glasses, Head protection, Rubber gloves, Safety footwear, Relevant Standard Operating Procedures and Sample reports







Module 4: Evaluate and develop entrepreneurship skills *Mapped to FIC/N9005 v1.0*

Terminal Outcomes:

• Define the requirements of skilled entrepreneur e.g., capability to start business, develop business, manage an organization, manage time, handle different people.

techniques.







commerce in promoting businesses.

- List the various types of online banking services being used widely.
- Discuss the procedure to apply for bank finances
- List the elements of a proposal to attract future business opportunities and prospective clients.
- Explain how to conduct entrepreneurial programs to identify business opportunities, generate employment and increase clientele.
- Understand the make in India campaign
- Discuss the importance of Swachh Bharat Abhiyan
- Understand the importance of entrepreneurship
- Describe the traits of successful entrepreneur
- List the types of enterprises
- Understand the importance of effective speaking and listening
- Discuss the importance of problem solving
- Discuss how to deal with failures
- Describe the core keys of marketing
- Discuss ways to manage risks at workplace

Classroom Aids:

Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

Nil





Role play a situation on how to address

issues pertaining to food safety and



Module 5: Basic Food Safety Standards Mapped to FIC/N9904 v 1.0

Terminal Outcomes:

- Explain the various food safety standards to be followed during the production process
- Prepare sample reports regarding food safety regulations, inspections, faults observation, etc.

Duration: 10:00 **Duration**: 20:00 Theory – Key Learning Outcomes **Practical – Key Learning Outcomes** List the types of biological, chemical and Apply appropriate practices to identify physical hazards present in the food various biological, chemical, and processing industry physical hazards at various stages Discuss various types of food (procurement of raw material; production, manufacturing, contaminations, their causes, and ways to distribution, delivery of finished prevent them product, etc.) of food processing Discuss the importance of following the standard procedures for ensuring food Employ appropriate practices to implement food safety procedures and safety) regulatory policies at the workplace State the importance of ensuring that the Employ appropriate practices to materials (such as raw materials, establish and follow Good processed materials, finished goods, etc.) Manufacturing Practices (GMPs) related are adequately isolated to prevent them to ergonomics, cleaning and sanitation, from contamination Outline the standard regulations to be equipment and containers, pest control, facilities, food storage, followed for ensuring food safety as listed transportation, distribution etc. in 'The Food Safety and Standards Act, 2006 that need to be followed during fruit Demonstrate the procedure followed wine production for allergen management and handling and storage of raw materials Discuss the role of HACCP, VACCP and TACCP as well as procedures to implement Apply appropriate practices to establish these in the food industry and follow monitoring systems, like Hazard Analysis Critical Control Point Discuss about product information and (HACCP) consumer awareness, product recall and Apply relevant practices to take withdrawal, and traceability appropriate action in instances such as Explain the procedure to conduct **VACCP** (Vulnerability Assessment workplace food safety audits Critical Control Points) and TACCP Discuss various types of allergens and (Threat Assessment Critical Control their management at the workplace Points) Discuss the corrective measures to be Apply appropriate practices to plan and applied to ensure food safety execute an audit on food safety address List various issues that can arise during the non-conformance with root cause food production and other processes analysis (RCA), and take corrective Discuss the procedure of performing root action preventive action (CAPA)

cause analysis and taking corrective and

preventive actions against workplace







problems

- State the significance of training the team members regarding various food safety procedures such as GMP, HACCP, etc.
- List the information to be recorded in the work process
- quality reported by the team members
- Prepare sample reports for food safety regulations followed, inspections done, faults observed, etc.
- Dramatize a situation on how to organize training and workshops on food safety aspects such as Good Manufacturing Practices (GMP), HACCP, VACCP, TACCP, etc.

Classroom Aids:

Training kit (Trainer guide, Presentations), White board, Marker, Projector, Laptop, Presentation, Participant Handbook and Related Standard Operating Procedures

Tools, Equipment and Other Requirements

Sample pictures of various biological, chemical, and physical hazards, Sample pictures of Contaminants, samples of potential allergens, process flow chart and HACCP plan.







Module 6: Follow Preventive Measures to avoid Accidents Mapped to FIC/N9903 v 1.0

Terminal Outcomes:

- Explain the standard procedure to be followed for dealing with workplace hazards safely
- Describe how to minimize potential risks and accidents at the workplace
- Demonstrate how to train the workforce on accident prevention techniques effectively

Duration: 04:00	Duration: 08:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Theory – Key Learning Outcomes Define 'hazards' and 'risks' Discuss the causes of various types of workplace hazards, risks and accidents, preventive measures to be taken as well as the procedures to deal with the same State the importance of maintaining the equipment effectively Discuss the standard practices to be followed to control and prevent risks, hazards, and accidents 	 Practical – Key Learning Outcomes Demonstrate how to use and dispose of relevant personal protective equipment as per tasks and work conditions Show how to implement organisational safety protocols to prevent accidents and hazards at the workplace Demonstrate how to use various types of fire extinguishers effectively Dramatize a situation on how to train the workforce on accident prevention techniques (such as role of appropriate
 Discuss the various types of safety signs and their relevance at the workplace State the significance of displaying the common hazard signages wherever required Outline the importance of ensuring the availability of general health and safety equipment at all times Describe the causes of fire, ways to prevent them and rescue techniques to be followed at times of fire at the workplace Outline the purpose and usage of various Personal Protective Equipment (PPE) required at the workplace 	PPE; use of fire extinguishers, dealing with hazards; identification of risks that could lead to accidents; safety protocols followed to avoid accidents; role of different types of hazard signs, safe lifting and carrying practices, etc. required at the workplace

Classroom Aids:

Training kit (Trainer guide, Presentations), White board, Marker, Projector, Laptop, Presentation, Participant Handbook and Related Standard Operating Procedures

Tools, Equipment and Other Requirements

Personal Protection Equipment: Safety glasses, Head protection, Rubber gloves, Safety footwear, Warning signs and tapes, Fire extinguisher, First aid kit, Relevant Standard Operating Procedures and Sample reports







Module 7: Manage Workplace Emergencies *Mapped to FIC/N9903 v 1.0*

Terminal Outcomes:

- Apply appropriate practices to deal with the emergencies at workplace effectively
- Describe the trainings to be provided for dealing with emergencies at the workplace

Duration : <i>04:00</i>	Duration : 08:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
	 Demonstrate the procedure to be followed to free a person from electrocution safely Show how to administer appropriate first aid procedure to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning, etc. Demonstrate the procedure e followed provide artificial respiration and cardio-pulmonary resuscitation (CPR) in various instances (e.g., cardiac arrest) Roleplay a situation on how to report information such as identified breaches in health, safety and security policies and procedures to the concerned authority accurately Dramatize a situation on how to train the workforce on emergency procedures (such as safe evacuation; treating a person from electrocution; immediate first aid to be given at times of cuts, bleeding, burns, choking,
	immediate first aid to be given at times
	cardio-pulmonary resuscitation (CPR); escalating issues beyond own scope, etc.) to be followed at the workplace

Classroom Aids:

Training kit (Trainer guide, Presentations), White board, Marker, Projector, Laptop, Presentation, Participant Handbook and Related Standard Operating Procedures

Tools, Equipment and Other Requirements

Personal Protection Equipment: Safety glasses, Head protection, Rubber gloves, Safety footwear, Warning signs and tapes, Fire extinguisher, First aid kit, Relevant Standard Operating Procedures and Sample reports







Module 8: Manage Infection Control *Mapped to FIC/N9903 v 1.0*

Terminal Outcomes:

- Describe the various steps to be followed for managing infections at the workplace
- Perform various tasks to train the workforce on infection control practices effectively

Duration: 02:00 **Duration**: *04:00* **Theory – Key Learning Outcomes Practical – Key Learning Outcomes** List the general sources of infections • Employ appropriate practices to follow and enforce Good Hygiene Practices Discuss the procedures to be followed (GHP) among the team members to tackle infection spread and the importance of carrying out the Employ appropriate practices to store sanitization of the work area, sanitisation materials effectively equipment and related facilities as per Dramatize a situation to address team standards issues related to workplace health and Explain various ways to store the safety Roleplay on how to train the sanitization materials appropriately workforce on infection control practices to be followed at the Discuss various types of potential infections along with the precautionary workplace measures to be taken, and safety protocols to be followed at the workplace Discuss appropriate actions to be taken during illness to self and others at the workplace Describe the parameters to be assessed during health and safety audits, their acceptability levels of appropriateness and the procedure to conducting these audits Discuss various parameters to be assessed and compliance issues to be addressed during the review of SOPs and the ways to improve them as per required quality and safety standards State the importance of undergoing preventive health check-ups organized by the organisation in compliance with **FSSAI** guidelines List various types of documents and records to be maintained in the work process

Classroom Aids:

Training kit (Trainer guide, Presentations), White board, Marker, Projector, Laptop, Presentation,







Participant Handbook and Related Standard Operating Procedures

Tools, Equipment and Other Requirements

Relevant Standard Operating Procedures and Sample reports







Module 9: Employability skills

Mapped to DGT/VSQ/N0102, v 1.0

Terminal Outcomes:

- Describe the traits of individual at workplace
- Demonstrate apply employability and entrepreneurship skills at workplace

Duration: 24:00	Duration: 36:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
List the levels of Maslow Hierarchy of needs	Demonstrate the procedure to plan the time taken
List the traits of effective team	to perform various tasks effectively.
Discuss tips for stress management	 Describe how market research is carried out
Discuss the importance of good work ethics	 Role play the characteristics of an effective
Discuss how to manage an enterprise	entrepreneur and leader
Describe how to plan effective strategies for	Demonstrate on how to identify new business
solving problems and improving work	opportunities
culture within the team.	Prepare a sample plan to solve problems and
List the various types of digital marketing	improve productivity at the workplace.
techniques.	Demonstrate the procedure to operate a computer
Discuss the types and importance of e-	for digital marketing, e-commerce, branding, etc.
commerce in promoting businesses.	
List the various types of online banking	
services being used widely.	
Discuss the procedure to apply for bank	
finances	
List the elements of a proposal to attract	
future business opportunities and	
prospective clients.	
Explain how to conduct entrepreneurial	
programs to identify business opportunities,	
generate employment and increase	
clientele.	
Understand the make in India campaign	
Discuss the importance of Swachh Bharat	
Abhiyan	
Understand the importance of	
entrepreneurship	
Describe the traits of successful	
entrepreneur	
List the types of enterprises	
Understand the importance of effective	
speaking and listening	
Discuss the importance of problem solving	







•	Discuss how to deal with failures	
•	Describe the core keys of marketing	
•	Discuss ways to manage risks at workplace	
Cla	ssroom Aids:	
Wł	nite board/Chart papers, marker.	
То	ols, Equipment and Other Requirements	
NII		







Module 10: Monitor the Production of Bakery Products *Mapped to FIC/N5021, v 1.0*

Terminal Outcomes:

- List different bakery products manufactured in the food processing industry and sequence used in their production operation
- Describe operating procedure of the machine and equipment used for manufacturing bakery products
- Apply proper techniques for evaluation of the baking process at various stages

Ouration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Outline the standard policies on reporting and documentation, product processes, food safety, etc. in bakery product Discuss various tools, equipment and machinery used in bakery production along with their operating procedures State the significance of ensuring effective working of tools, equipment and machinery for production Outline the importance of following the standard process chart/product flow chart/formulation chart for producing the bakery products Discuss various types of raw materials, ingredients, finished products, and packaging material required for making various baked products Elaborate on different bakery products manufactured in the food processing industry and sequence of their production operation State the significance of ensuring proper mixing of all the ingredients for the preparation of premix as per the SOP as well as maintaining mixing parameters for the equipment used in production of bakery products Explain methods to monitor the processes like dough making, cutting, moulding, slicing during baking production Explain methods to inspect production process of the bakery products Discuss effective techniques used for the evaluation of the baking process at 	 Show how to check the mesh size for appropriate size and proper placement Apply appropriate practices to confirm the dough is prepared as per the specifications Demonstrate techniques to ascertain that the temperature and humidity of the fermentation chamber or room are maintained adequately as per standards Apply appropriate practices to ensure that the dough mix is transferred safely into the hopper of dough shaping machine as per SOP Demonstrate methods to monitor the dough shaping machine for maintaining desired standards Employ proper practices to ensure appropriate quantity of toppings are loaded in the sprinkler machine, weight of cream fat is as per the standard recipe formulation and flavours are added into the cream using appropriate mesh sieve or pressure flow Apply proper methods to monitor the process of preparation of baking pans and ensure the shaped dough pieces are transferred into baking pans and the baking pans are transferred into the oven safely Show how to check the controls of baking machine

Classroom Aids







Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Various equipment and machines, like metering devices, scale indicators, flour sifter, pre-mixer, mixers, pressure pumps, blowers, dough shaping machine etc., Required topping material, like salt, sugar, Choco chips, coconut desiccated powder, etc., baking machine, such as rack oven, rotary oven, horizontal oven etc.







Module 11: Perform Pre-Packaging Activities *Mapped to FIC/N5021, v 1.0*

Terminal Outcomes:

- Apply proper practices to ensure bakery products are cooled properly before packaging
- Explain the standard procedure to test the quality of the final baked product
- Describe methods of segregation and proper storage of the discarded and fresh items as per standard work practices

Duration: 10:00	Duration : 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Outline the importance of ensuring that bakery products are cooled properly before packaging Describe the standard procedure to test the quality of the final baked product State the significance of ensuring timely completion of production and achieving set targets (including quantity and quality) with minimum or no wastage Discuss effective ways to handle the product rejections at critical points Discuss various corrective actions to be taken for any production defects, product variances, etc. during bakery production Describe methods of segregation and proper storage of the discarded and fresh items as per standard work practices Discuss the types of records to be maintained for bakery production along with their standard format 	 Apply proper methods to inspect product parameters for standard compliance Apply proper methods to monitor the critical control points and check the effectiveness to ensure product safety Apply proper practices to ensure sample of the baked product are sent to the quality lab for analysis and testing Role play on how to provide suggestions for corrective actions for any problems related to production, process, and products

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation, Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Sample records, like raw materials record, supplier details, supplier quality document, internal quality analysis report, production report, equipment and machinery performance details, efficiency and capacity utilization of equipment, etc.







Module 12: Perform Post-Production Activities Mapped to FIC/N5021, v 1.0

Terminal Outcomes:

- Apply proper methods to check and ensure packaging material and labelling is used are as per the FSSAI regulations of packaging and labelling
- Describe standard procedures on procurement, storing, production, packaging, product delivery, repair, maintenance, reporting, documentation, hazard handling, and safe disposal of discarded items
- Apply appropriate methods to monitor the post-production cleaning process of the work area, machinery, tools and equipment as per standards

Duration: 10:00 **Duration**: 20:00 Theory – Key Learning Outcomes **Practical – Key Learning Outcomes** Discuss various types of post-Show how to check packaging material production activities and maintenance and labelling used are as per the FSSAI of machinery and equipment regulations of packaging and labelling State the significance of ensuring that Demonstrate how to inspect the quality sample of the final product is sent to of filling and sealing of the finished the quality lab for analysis products and check the weight to Describe the methods of inspecting the ensure it is within permissible limits final packing and labelling of the Employ appropriate practices to take products as per applicable FSSAI norms appropriate preventive and corrective Outline FSSAI and HACCP regulations actions against any non-conformances and ensure effective implementation on personal hygiene norms, food safety practices, packaging, labelling storing, Role play on how to supervise appropriate placement and safe etc. storage of the final packed product and State the significance of maintaining of tools and equipment as per schedule report discrepancies to the manager Apply proper methods to monitor the and ensuring the repair and maintenance is completed effectively post-production cleaning process of the before the start of the next production work area, machinery, tools and equipment as per standards cycle Outline the importance of following the Dramatize a situation to coordinate standard practices for the repair and with internal departments and external agencies to plan the fumigation work maintenance of the production machinery, tools and equipment Describe standard procedures on procurement, storing, production, packaging, product delivery, repair, maintenance, reporting, documentation, hazard handling, safe

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector, Laptop, Presentation, Participant Handbook and Related Standard Operating Procedures

disposal of discarded items

Outline the importance of optimum resource utilization at the workplace







Tools, Equipment and Other Requirements

Required final bakery products with packing and labelling, Various cleaning products, like cleaning agents and sanitizers







Module 13: Supervise the Production of Fruit and Vegetable Products $Mapped\ to\ FIC/N0133\ v\ 2.0$

Terminal Outcomes:

- Apply proper inspection methods to check the assembling process of the fittings such as stirrer,
 blades, pipes, and other equipment and ensure machinery is ready for production
- Describe effective sampling methods like systematic and random sampling

Duration: 15:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss food chemistry and microbiology related to fruits and vegetables Describe standard methods to check and ensure cleanliness, sterilization, and maintenance of work area and all fruit and vegetable processing machinery Discuss various types, functions and cleaning and maintenance procedures of fruit and vegetable processing machinery Explain methods to monitor the process and physical parameters such as appearance, colour, texture, maturity, etc. to check the quality of the fruits and vegetables Describe effective sampling methods like systematic and random of pulp or juice Discuss standard and FSSAI laws and regulations on product, packaging, and labelling and canning process and parameters Describe various causes of fresh food spoilage and significance of packing and transferring the packed cartons/ pallets to storage area under sterilized conditions as per standards Describe the importance of maintaining safe and clean work environment 	 Show how to check assembling process of the fittings such as stirrer, blades, pipes and other parts of the equipment and ensure all machinery are ready for production as per standard procedure Roleplay a situation to coordinate with maintenance team Demonstrate how to check process parameters like temperature, pressure, time etc. and control points of machines and equipment at regular intervals to ensure operational performance Apply proper inspection methods to check the quality of graded and sorted produce through physical & sensory parameters Apply appropriate practices to ensure pulp or juice of fruits is extracted using pulper or juicer with desired sieve size and the collected pulp is free from impurities like seeds, fiber, dirt etc. Perform steps to collect samples of the pulp or juice and check quality parameters before sending it to the quality lab for analysis as per standards Dramatize a situation to train the personnel working in fruit and vegetable processing line Show how to supervise packaging process of the finished products and carry out random check on the weight of packed products Demonstrate how to check the labelling details on the packaging material as well as weight and quality of the container Apply appropriate approaches to analyze production performance







records and data to identify issues related to fruit and vegetable products processing

 Role play on how to discuss unresolved issues with the manager and identify solutions to prevent/correct problems and implement suggested corrective action

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Required machines and equipment, like grading and sorting machine and line conveyor, pulper, jet sprays, sprinklers etc., pulp or juice of fruits, packaging material with labelling, like lacquered cans, glass bottles, PET bottles, etc., Sample various production performance records and data







Module 14: Perform Post-Production Activities and Maintenance of the Records

Mapped to FIC/N0133 v 2.0

Terminal Outcomes:

- Apply proper methods to monitor work area, machinery, equipment, and tools for cleanliness
- Explain the methods of maintaining and updating the records of product, production, packaging, supplier, audits, etc.
- Role play on how to provide suggestions and corrective actions for any problems related to product and process

Duration : <i>15:00</i>	Duration : 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Outline the policy on documentation, food safety etc. Describe post-production cleaning and maintenance procedures of the production equipment and area State the significance of ensuring the team comply with the safety and cleaning procedures Outline the importance of ensuring periodic maintenance of all machines and equipment as per standard procedure or suppliers instructions/manuals and minor repairs/faults of all machines are attended before the start of the next production cycle Describe the methods of maintaining and updating the record of raw material, finished products, production, packaging, supplier, audits, etc. Discuss quality assurance and quality control parameters of the produce action plan in case of machinery breakdown List the documents that need to be maintained for the production process 	 Apply proper monitoring methods to ensure work area, machinery, equipment, and tools are properly cleaned with the recommended cleaning agents and sanitizers Apply proper practices to arrange for the repair/corrective maintenance in case of machine breakdowns during the production Role play on how to provide suggestions and corrective actions for any problem related to product and process Dramatize a situation to provide production update to the manager by compiling, sorting, and analyzing production performance records of all shifts

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Sample various reports related to product, like names of raw materials, supplier details, receiving date/date of manufacture, expiry date, supplier quality document, internal quality analysis report,







etc., production record, like product produced, production sequence, equipment and machinery details, efficiency and capacity utilization of equipment, etc., packaging record, like package supplier details, type of packaging used, quality inspection record of packaging material, etc., Required finished products with details, like name of the product, batch number, time of packing, date of manufacture, date of expiry, other label details, etc.







Module 15: Prepare and maintain work area and process machineries for production of dairy products

Mapped to FIC/N2030 v 1.0

Terminal Outcomes:

- Explain the methods of maintaining and updating the records of product, production, packaging, supplier, audits, etc.
- Perform pre-start checks and ensure post -production cleaning and regular maintenance of equipment

Duration: 15:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Describe the importance of cleanliness of the work area Outline the policy on documentation, food safety etc. State the significance of ensuring the team comply with the safety and cleaning procedures Outline the importance of ensuring periodic maintenance of all machines and equipment as per standard procedure Describe the methods of maintaining and updating the record of raw material, finished products, production, packaging, supplier, audits, etc. Discuss quality assurance and quality control parameters of the produce action plan in case of machinery breakdown List the documents that need to be maintained for the production process 	 Apply proper monitoring methods to ensure work area, machinery, equipment, and tools are properly cleaned with the recommended cleaning agents and sanitizers Check if the work area is safe and hygienic for food production Check if the work area is safe and hygienic for food production Check the working and performance of all machineries and tools used for fruits and vegetables processing Check if the equipment are washed with approved sanitizers Apply proper practices to arrange for the repair/corrective maintenance in case of machine breakdowns during the production

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures.

Tools, Equipment and Other Requirements

Homogenizer, Separator, Pasteurizer, Churner, Paneer Hooves, Paneer cutter Packaging Machines, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual







Module 16: Supervise production of dairy products Mapped to FIC/N2030 v 1.0

Terminal Outcomes:

- Apply proper inspection methods to monitor if machinery is ready for production
- Role play on how to provide suggestions and corrective actions for any problems related to product and process

Duration: 15:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Describe the quality control parameters for dairy products Outline the organization standards, process standards and procedures followed in the organisation State the significance of ensuring the team comply with the safety and cleaning procedures Discuss the food safety and hygiene standards followed in the dairy product processing unit Discuss the types and varieties of milk and products produced from them Discuss production process, process parameters for various dairy products Discuss emergency production stop procedure Discuss the types and category of packaging materials, packaging machineries Describe the storage procedures for raw materials, packaging materials and finished goods Describe the food laws and regulations on raw materials, product(s), packaging and labelling 	 Perform a check if all the machineries are clean and in good working conditions Demonstrate assembling of all components of machines Perform a pre check on all machineries Demonstrate the monitoring of control panel Check the quality report of milk to ensure conformance to the industry standards Check for timely production of the food product Demonstrate cleaning the machineries used with recommended sanitizers following CIP (clean-in-place) procedure Demonstrate cleaning the equipment and tools used using recommended cleaning agents and sanitizers

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Homogenizer, Separator, Pasteurizer, Churner, Paneer Hooves, Paneer cutter Packaging Machines, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual







Module 17: Prepare and Maintain Work Area and Process Machineries for Meat & Poultry Processing

Mapped to FIC/N3023 v 1.0

Terminal Outcomes:

- Explain the methods of maintaining and updating the records of product, production, packaging, supplier, audits, etc.
- Perform pre-start checks and ensure post -production cleaning and regular maintenance of equipment

Duration: 15:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 State the materials and equipment used in the cleaning and maintenance of the work area Describe the process of preparing the work area for scheduled production Describe the functions to be carried out before starting production Discuss about the machines and tools required for production 	 Apply proper monitoring methods to ensure work area, machinery, equipment, and tools are properly cleaned with the recommended cleaning agents and sanitizers Check if the work area is safe and hygienic for food production Check the working and performance of all machineries and tools Apply proper practices to arrange for the repair/corrective maintenance in case of machine breakdowns during the production

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures.

Tools, Equipment and Other Requirements

Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual, All equipment for demonstration







Module 18: Supervise meat and poultry processing operations Mapped to FIC/N3023 v 1.0

Terminal Outcomes:

- Apply proper inspection methods to monitor if machinery is ready for production
- Role play on how to provide suggestions and corrective actions for any problems related to product and process

Duration: 15:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss control measures and corrective actions for any problems related to production. Discuss the random check performed to ensure the quality of products. Describe the food laws and regulations on raw materials, product(s), packaging and labelling Discuss production process, process parameters for various meat and poultry products Explain about the edible and inedible organs based on local and religious food habits. Discuss cleaning procedures such as CIP and COP and procedures for disposal of waste Discuss the food safety and hygiene standards followed in the meat and poultry industry Discuss emergency production stop procedure Describe the storage procedures for raw materials, packaging materials and finished goods Describe the food laws and regulations on raw materials, product(s), packaging and labelling 	 Perform a check if all the machineries are clean and in good working conditions Perform random check on weight of packed products, check label details like date of manufacture, batch number, expiry date etc Monitor packaging of finished products Demonstrate the methods to report production information to the manager and other stakeholders. Demonstrate the monitoring of control panel Demonstrate cleaning the machineries used with recommended sanitizers following CIP (clean-in-place) procedure Demonstrate cleaning the equipment and tools used using recommended cleaning agents and sanitizers

Classroom Aids

Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Participant Handbook and Related Standard Operating Procedures, Laptop External Speakers.

Tools, Equipment and Other Requirements

Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Covers, Sanitizer, Safety Manual ,Log Books etc. ,Different Set of Knives, Different Samples of Meat







Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B.Sc. or graduate/B.Tech/BE	Food technology or food engineering	3	Food processing	1	Food processing	
M.Sc./M.Tech/ME	Food technology or food engineering	2	Food processing	1	Food processing	
Diploma /certificate course	Food Technology / Food Engineering /packaging/Ho me science, or allied sector	4	Food processing	1	Food processing	

Trainer Certification				
Domain Certification	Platform Certification			
"Supervisor-Food Processing Industries", "FIC/Q9009, v1.0", Minimum accepted score is 80%	"Trainer", "MEP/Q2601, v1.0" with a scoring of minimum 80%			







Assessor Prerequisites						
Minimum Educational	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
Qualification		Years	Specialization	Years	Specialization	
M.Sc/M.Tech/ME	Food technology or food engineering	2	Food processing	1	Food processing	
B.Sc. or graduate/B.Tech/ BE	Food technology/ Home Science	3	Food processing	2	Food processing	
Diploma /certificate course	Hotel management/ Food Science/ Home Science	4	Food processing	2	Food processing	

Assessor Certification			
Domain Certification	Platform Certification		
"Supervisor-Food Processing Industries", "FIC/Q9009, v1.0", Minimum accepted score is 80%	"Assessor", "MEP/Q2701, v1.0" with the scoring of minimum 80%		







Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.

1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records
- If the batch size is more than 30, then there should be 2 Assessors.

2. Testing Environment: Assessor must:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME should be verified by the other subject Matter Experts along with the approval required from SSC
- Questions are mapped with NOS and PC
- Question papers are prepared considering that level 1 to 3 is for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate
- 6. Method for assessment documentation, archiving, and access







- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage and are stored in the Hard Drives







Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training .
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.







Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NOS	National Occupational Standards
TVET	Technical and Vocational Education and Training
SOP	Standard Operating Procedure
FSSAI	Food Safety and Standards Authority of India
HACCP	Hazard Analysis and Critical Control Point
CIP	Clean In Place
СОР	Clean Out of Place