



Model Curriculum

QP Name: Multi Skill Technician (Food Processing)

QP Code: FIC/Q9007

Version: 3.0

NSQF Level: 4.0

Model Curriculum Version: 3.0

Food Industry Capacity & Skill Initiative || Shriram Bharatiya Kala kendra, 3rd floor, 1, Copernicus Marg,
Mandi House, New Delhi

Delhi 110001 || email: admin@ficsi.in

Table of Contents

Contents

Training Parameters.....	3
Program Overview	5
Training Outcomes.....	5
Compulsory Modules.....	5
Module 1: Introduction to Food Processing Sector and job role of a Multi Skill Technician (Food Processing)	9
Module 2: Carry Out Preparation for Production.....	10
Module 3: Juice and Squash Production.....	12
Module 4: Packaging and Post Production	15
Module 5: Preparing Fruits and Vegetables for Making Pickles.....	17
Module 6: Production and Post-Production Activities of Various Types of Pickles.....	19
Module 7: Carry out Production of Jam, Jelly and Ketchup.....	21
Module 8: Carry out Packing and Post-production Activities for Jam, Jelly and Ketchup	23
Module 9: Carry out Process of Drying/ Dehydrating the Fruits and Vegetables	25
Module 10: Carry out Production of Fruit Pulp from Various Fruits	28
Module 11: Carry Out Sorting and Grading of the Produce	30
Module 12: Carry Out Packing, Storing and Post-Production Activities	33
Module 13: Carry Out Preparation and Production of Biscuits	35
Module 14: Carry Out Post-Production Activities of Biscuits	37
Module 15: Produce Whole Spices, Seasonings and Curry Powder	38
Module 16: Carry Out Packing and Post-Production Maintenance of Equipment.....	41
Module 17: Implement Personal Hygiene and Good Manufacturing Practices	43
Module 18: Apply Food Safety Practices at Workplace.....	45
Module 19: Employability Skills (30 Hours)	47
Module 20: On-the-Job Training.....	49
Annexure.....	51
Trainer Requirements	51
Assessor Requirements.....	52
Assessment Strategy.....	53
References	55
Glossary.....	55
Acronyms and Abbreviations.....	56

Training Parameters

Sector	Food Processing
Sub-Sector	Multi-Sectoral
Occupation	Multi-Sectoral
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8160.2300,2400,3200,7514.1000, 0700, 7512.0100
Minimum Educational Qualification and Experience	<p>12th-grade pass</p> <p>OR</p> <p>Completed 2nd year of 3-year diploma after 10th</p> <p>OR</p> <p>10th Grade or Equivalent with 3 years' experience in food processing</p> <p>OR</p> <p>8th Grade Pass with 6 years of experience in food processing</p> <p>OR</p> <p>Previous relevant Qualification of NSQF Level 3.0 with 3 years experience in food processing</p> <p>OR</p> <p>Previous relevant Qualification of NSQF Level 3.5 with 1.5-year experience in food processing</p>
Pre-Requisite License or Training	NA
Minimum Job Entry Age	16 Years
Last Reviewed On	22/10/2024
Next Review Date	21/10/2027
NSQC Approval Date	22/10/2024
QP Version	3.0
Model Curriculum Creation Date	15/09/2024
Model Curriculum Valid Up to Date	21/10/2027

Model Curriculum Version	3.0
Minimum Duration of the Course	870 Hours
Maximum Duration of the Course	870 Hours

Program Overview

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

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Explain the steps required to prepare to produce food products.
- Describe the process of producing squash and juice from fruits.
- Elucidate the production methods used for various types of pickles.
- Discuss the procedure for producing jam, jelly, and ketchup.
- Describe the methods for drying and dehydrating fruits and vegetables.
- Explain the process of producing fruit pulp from various fruits.
- Describe the canning process for fruits and vegetables.
- Discuss the techniques for sorting, grading, packing, and storing produce.
- Explain the process of production of biscuit in industrial units.
- Describe the process of producing spices and seasoning.
- Elucidate the food safety guidelines that must be applied in food processing.
- Explain the key employability skills required in the food processing industry.
- Discuss the basic health and safety practices to be followed at a food processing workplace.
- Discuss the Employability and Entrepreneurship Skills.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration (Hours)	Practical Duration (Hours)	On-the-Job Training Duration (Mandatory) (Hours)	On-the-Job Training Duration (Recommended) (Hours)	Total Duration (Hours)
FIC/N9026: Prepare for Production NOS Version No.: 1.0 NSQF Level: 3.0	20:00	40:00	00:00	00:00	60:00
Module 2: Carry Out Preparation for Production	20:00	40:00	00:00	00:00	60:00
FIC/N0103: Produce Squash and Juice NOS Version No.: 2.0 NSQF Level: 3.0	60:00	60:00	00:00	00:00	120:00
Module 1: Introduction to Food Processing Sector and Job Role of a Multi Skill Technician (Food Processing)	05:00	00:00	00:00	00:00	05:00

Module 3: Juice and Squash Production	35:00	40:00	00:00	00:00	75:00
Module 4: Packaging and Post-Production	20:00	20:00	00:00	00:00	40:00
FIC/N0209: Produce a variety of pickles NOS Version No.: 1.0 NSQF Level: 3.0	30:00	60:00	00:00	00:00	90:00
Module 5: Preparing Fruits and Vegetables for Making Pickles	10:00	20:00	00:00	00:00	30:00
Module 6: Production and Post-Production Activities of Various Types of Pickles	20:00	40:00	00:00	00:00	60:00
FIC/N0210: Carry out production of jam, jelly and ketchup NOS Version No.: 1.0 NSQF Level: 3.0	30:00	60:00	00:00	00:00	90:00
Module 7: Carry out production of Jam, Jelly and Ketchup	20:00	40:00	00:00	00:00	60:00
Module 8: Carry out Packing and Post-Production Activities for Jam, Jelly and Ketchup	10:00	20:00	00:00	00:00	30:00
FIC/N0118: Dry/ Dehydrate fruits and vegetables NOS Version No.: 2.0 NSQF Level: 4.0	20:00	40:00	00:00	00:00	60:00
Module 9: Carry out Process of Drying/ Dehydrating the Fruits and Vegetables	20:00	40:00	00:00	00:00	60:00
FIC/N0122: Produce fruit pulp from various fruits NOS Version No.: 2.0	20:00	40:00	00:00	00:00	60:00

NSQF Level: 4.0					
Module 10: Carry out Production of Fruit Pulp from Various Fruits	20:00	40:00	00:00	00:00	60:00
FIC/N0129: Sort, grade, pack and store the produce NOS Version No.: 3.0 NSQF Level: 3.0	30:00	90:00	00:00	00:00	120:00
Module 11: Carry Out Sorting and Grading of the Produce	20:00	50:00	00:00	00:00	70:00
Module 12: Carry Out Packing, Storing and Post-Production Activities	10:00	40:00	00:00	00:00	50:00
FIC/N5022: Carry out biscuit production in industrial units NOS Version No.: 1.0 NSQF Level: 4.0	20:00	40:00	00:00	00:00	60:00
Module 13: Carry Out Preparation and Production of Biscuits	15:00	30:00	00:00	00:00	45:00
Module 14: Carry Out Post-Production Activities of Biscuits	05:00	10:00	00:00	00:00	15:00
FIC/N8517: Carry out production of spices, curry powder and seasonings NOS Version No.: 1.0 NSQF Level: 3.0	30:00	30:00	00:00	00:00	60:00
Module 18: Produce whole spices, seasonings and curry powder	15:00	20:00	00:00	00:00	35:00
Module 19: Carry Out Packing and Post-Production Activities	15:00	10:00	00:00	00:00	25:00
FIC/N9906: Apply food safety guidelines in Food Processing NOS Version No.: 1.0	10:00	20:00	00:00	00:00	30:00

NSQF Level: 4.0					
Module 20: Implement Personal Hygiene and Good Manufacturing Practices	05:00	10:00	00:00	00:00	15:00
Module 21: Apply Food Safety Practices at the Workplace	05:00	10:00	00:00	00:00	15:00
DGT/VSQ/N0101: Employability Skills (30 Hours) NOS Version No.: 1.0 NSQF Level: 2.0	30:00	00:00	00:00	00:00	30:00
Module 22: Employability Skills (30 Hours)	30:00	00:00	00:00	00:00	30:00
Total Duration	300:00	480:00	90:00	00:00	870:00

Module Details

Module 1: Introduction to Food Processing Sector and job role of a Multi Skill Technician (Food Processing)

Mapped to FIC/N0103, v2.0

Terminal Outcomes:

- Describe the food processing sector in brief.
- Discuss the career opportunities available to the individual within the food processing sector.
- Explain the importance of training program and job role of a Multi Skill Technician (Food Processing).

Duration (in hours): 05:00	Duration (in hours): 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Define the term ‘food processing’. • Discuss the size and scope of the food processing industry in brief. • List the various sub-sectors of food processing industry. • Explain the objective of training individuals for the job of a ‘Multi Skill Technician (Food Processing)’. • Discuss the future trends and career growth opportunities available to the ‘Multi Skill Technician (Food Processing)’. • Summarise the key role and responsibilities of a ‘Multi Skill Technician (Food Processing)’. 	
Classroom Aids	
Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Carry Out Preparation for Production

Mapped to FIC/N9026, v1.0

Terminal Outcomes:

- Discuss the standard practices to be followed to plan for production.
- Demonstrate the tasks to be performed to prepare for the production process.

Duration (in hours): 20:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss how to plan and prioritize the tasks to be performed. • State the importance of obtaining work instructions from supervisor to plan the work process. • State the importance of process chart, product flow chart, formulation, chart, etc. to obtain required information. • List the materials, equipment and manpower required in the selection of fruits and vegetables. • List the key considerations to prepare the work schedule. • Identify the resource requirements as per the production schedule. • Explain how to utilise the machine capacity of the machinery involved with respect to the processing time, production order and batch size for each product. • List the chemical agents, sanitisers and methods used to clean the work area. • Identify different kinds of waste material and comprehend the ways to dispose them safely. • Describe how to carry out inspection of tools, equipment, and machinery to be used in the job. • Discuss the policies and procedures to be followed to prepare for the work process. • State the importance of inspecting tools, equipment and machinery on a timely basis. 	<ul style="list-style-type: none"> • Show how to prepare a plan to carry out various tasks as required in the job. • Show how to prepare sample estimates for resource requirements to carry out the tasks. • Demonstrate method to be followed for cleaning (CIP, COP etc.) and maintaining a clean work area. • Demonstrate the use of different tools and machineries used in the selection of fruits and vegetables. • Show how to identify, label and store different chemicals in food processing unit safely. • Demonstrate with help of roleplay a situation on how to allot work and responsibilities to the team and confirm that they have understood. • Demonstrate the procedure to be followed for disposing the waste material (wet, dry, plastic, packaging material, food waste and glass waste) as per environmentally safe practices. • Show how to inspect the tools, equipment and machinery thoroughly for production. • Demonstrate how to receive and organize the work materials appropriately.
Classroom Aids	

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Process related documents, list of raw materials, tools, equipment and machinery, organizational documents, and logbook

Module 3: Juice and Squash Production

Mapped to FIC/N0103, v2.0

Terminal Outcomes:

- Describe the procedures for receiving, washing, sorting, and slicing fruits to prepare them for juice extraction.
- Explain the techniques used to extract juice from various fruits, ensuring maximum yield and quality.
- Explain the process of pasteurizing fruit juice to ensure safety and prolong shelf life.
- Demonstrate how to clarify fruit juice using appropriate methods and equipment.
- Show the process of preparing squash from fruit juice.

Duration (in hours): 35:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain food safety and hygiene standards for fruit juice production. • Describe the varieties of raw materials used for fruit juice and squash production. • Discuss the use of modern equipment for fruit preparation, such as fruit washers, sorting machines, peeling machines, and slicers/dicers. • Describe the use of modern fruit juice extraction equipment, such as fruit crushers, pulpers, belt presses, hydraulic presses, centrifugal juicers, and finishers. • Explain the use of tools for manual fruit juice extraction, such as hydraulic juice presses, lever-operated citrus presses, and commercial-grade masticating juicers. • Discuss the process of aroma stripping during fruit juice production. • Explain new technologies relevant to fruit juice extraction, such as Centrifugal Juicers, Ultrasonic Juice Extraction, Membrane Filtration Systems, Supercritical CO₂ Extraction, High-Pressure Processing (HPP), and Vacuum Evaporation. 	<ul style="list-style-type: none"> • Demonstrate the process of checking the weight and quality of fruits based on appearance, colour, texture, and maturity upon receipt. • Show how to effectively wash and rinse fruits to remove dirt and impurities. • Demonstrate the process of inspecting and removing damaged or unsuitable fruits according to standard procedures. • Show how to cut or grate fruits to the required size and collect them hygienically for further processing. • Demonstrate the process of removing stems, seeds, and peels from various fruits like grapes and citrus fruits. • Show how to grind fruits such as apples and pears into appropriate gratings. • Demonstrate how to determine and apply the correct enzymes for different types of fruits. • Show how to collect and filter extracted juice to achieve desired quality standards. • Demonstrate the process of concentrating fruit juice and managing aroma recovery.

<ul style="list-style-type: none"> • Describe the importance of ensuring the efficiency of pasteurization for food safety and quality. • Explain the methods to evaluate pasteurization effectiveness, including enzyme activity tests, microbiological testing, monitoring Hydroxymethylfurfural (HMF) levels, and rigorous time and temperature monitoring. • Discuss the use of pasteurizers and heat exchangers for pasteurizing fruit juice. • Describe the use of modern equipment for fruit juice clarification, such as ultrafiltration units and membrane filtration systems. • Explain new technologies relevant to juice clarification, such as Ultrasonic Homogenizers. • Discuss the use of modern squash production equipment, such as mixing tanks, homogenizers, and blending tanks. • Explain the use of relevant tools for manual squash production. 	<ul style="list-style-type: none"> • Show how to pasteurize fruit juice at precise temperatures and process parameters. • Demonstrate how to cool pasteurized juice to required storage temperatures while ensuring hygiene. • Demonstrate the process of calculating and adding enzymes for effective juice clarification. • Show how to use equipment to remove fine particles and achieve clear juice. • Demonstrate how to check juice quality based on appearance, flavour, and taste. • Show how to prepare samples for lab analysis to ensure compliance with standards. • Show how to prepare sugar syrup with accurate sugar and acid quantities. • Demonstrate the process of filtering syrup to remove unwanted particles. • Show how to blend juice concentrate, water, syrup, acids, preservatives, colour, and flavour to specification. • Demonstrate how to pasteurize and cool squash blend under controlled conditions. • Show how to check squash quality and coordinate lab analysis for compliance. • Demonstrate the process of transferring finished products into filling tanks at correct levels.
---	--

Classroom Aids
Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films
Tools, Equipment and Other Requirements
Thermometer (Digital), Beakers, Measuring Cylinder, Measuring Flask, Weighing Balance (Digital), Brix Meter/Refractometer, Fruit Tray, Cutting Knives, Mixer/Electric Mixer, Fruit Slicing Machine, Pulper, Peeler, Steam Jacketed Kettle, Slicer, Pasteurizer, Sterilizer, Processing Unit (Machine

Specific), Conveyor and Processing Belts Clarifier, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual.

Module 4: Packaging and Post Production

Mapped to FIC/N0103, v2.0

Terminal Outcomes:

- Explain the process of filling, packing and storing juice and squash.
- Show how to pack, seal, and label juice and squash according to specified procedures.
- Demonstrate the post-production activities in accordance with health and safety guidelines.

Duration (in hours): 20:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the procedures for transferring finished juice and squash products into filling tanks and ensuring they reach the recommended levels. • Explain the steps involved in loading packing materials such as Tetra packs, glass bottles, and plastic containers into packaging machines, and securing sealing materials and labels in the respective machines. • List the types and categories of packaging materials used in fruit juice and squash production. • Discuss the use of relevant packing, sealing, and labelling machineries in fruit juice and squash production. • Explain the applicable requirements and standards for packing, sealing, and labelling in fruit juice and squash production. • Describe the storage requirements and procedures for fruit juice and squash raw materials, packaging materials, and products. • Discuss the Clean-in-Place (CIP) and Clean-out-of-Place (COP) procedures in fruit juice and squash production. • Explain the safe use and storage of relevant sanitizers and disinfectants. • Discuss the laws and regulations applicable to food product packaging and 	<ul style="list-style-type: none"> • Demonstrate the process of transferring finished juice and squash products into filling tanks up to the recommended levels. • Show how to load various packing materials into packaging machines and ensure sealing materials and labels are correctly positioned. • Demonstrate how to set the appropriate filling volumes on filling machines following company standards. • Show how to set the date coding machine with batch numbers, manufacturing dates, expiry dates, etc. • Demonstrate the process of packing, sealing, and labelling juice and squash products according to specified procedures. • Show how to periodically check the weight of packed products to ensure they meet applicable standards. • Demonstrate how to attach straws to packaged products as required during the packaging process. • Show how to store packed and labelled products in designated storage areas under optimal conditions, using appropriate storage accessories. • Demonstrate the process of reporting discrepancies or concerns about packing

<p>labelling.</p>	<p>and labelling to the department supervisor for prompt action.</p> <ul style="list-style-type: none"> • Show how to clean work areas, tools, equipment, and machinery using approved sanitizers. • Demonstrate how to collect and dispose of waste materials generated during production. • Show how to complete necessary documentation related to production processes. • Demonstrate the filling and packing of finished juice and squash products. • Show how to label and seal packaged products according to standards. • Show how to operate sealing and labelling machines following standard procedures. • Demonstrate the procedure to store finished products in designated storage areas. • Show how to store packed products under optimal conditions and report any issues promptly.
<p>Classroom Aids</p>	
<p>Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films</p>	
<p>Tools, Equipment and Other Requirements</p>	
<p>Filling Machine, Sealing Machines, Labeling Machines, Packaging Materials (bottles, caps, labels), Work Uniforms, Protective Head and Hair Covering, Safety and Waterproof Footwear, Containers for Storing Packed Food, Utensils for Handling Food, Hand Tools (e.g., Wrenches, Screwdrivers for Machine Adjustments, knives, scoops, etc.), Lifting Aids, Eye and Facial Protection, Coats and Aprons, Protective Hand and Arm Coverings, Ear Plugs or Muffs, Mesh Aprons, Containers.</p>	

Module 5: Preparing Fruits and Vegetables for Making Pickles

Mapped to FIC/N0209, v1.0

Terminal Outcomes:

- Explain how to prepare the fruits and vegetables for making pickles.

Duration (in hours): 10:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the FSSAI food safety regulations relevant to pickle making and how they ensure product safety. • Describe the different types of fruits and vegetables suitable for making pickles and the characteristics that make them ideal for this purpose. • Determine the appropriate quality standards for raw materials used in pickle making to ensure a high-quality final product. • Discuss the process of washing and rinsing fruits and vegetables before pickle production, highlighting key steps and considerations. • Explain the different methods for drying fruits and vegetables after washing, and their respective advantages and disadvantages. • Describe how to properly peel and slice fruits and vegetables for pickling without causing damage. • Explain the parameters used for sorting and grading fruits and vegetables, such as size, shape, color, and appearance, and their importance in the pickling process. 	<ul style="list-style-type: none"> • Demonstrate how to sample and test the water quality following the appropriate procedures before use. • Demonstrate how to wash, rinse, and dry the rinsed fruits and vegetables using the appropriate method. • Demonstrate how to inspect and discard damaged fruits and vegetables. • Show how to grade fruits and vegetables based on parameters such as size, shape, color, and appearance. • Demonstrate how to peel and wash fruits and vegetables using the appropriate methods. • Show how to slice fruits and vegetables to the required size and check for spoilage. • Demonstrate how to measure ingredients like vinegar, salt, and sugar to prepare the brine solution. • Show how to prepare the brine solution, check its salt concentration, and store it in clean, labelled containers. • Demonstrate how to maintain the appropriate temperature and humidity in storage to preserve the brine's quality. • Demonstrate how to carry out necessary pre-treatments like blanching or soaking to prepare the produce for curing. • Show how to maintain cut fruits and vegetables in the brine solution for

	<p>fermentation for the recommended duration.</p> <ul style="list-style-type: none"> • Demonstrate how to maintain salt equilibrium by stirring fruits and vegetables periodically. • Show how to check the acidity levels to ensure the fermentation process is complete. • Demonstrate how to check the curing progress for any signs of spoilage or contamination and take corrective measures.
Classroom Aids	
Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Water Tank, Spraying System, Drying Line Conveyor, Sorting Line Conveyor, Peeling Machine, Steam Jacketed Kettle, Salinometer, Crusher/Mill, Pulper, Grinding Machine, Pickle Making Machine, Container, Filling Machine, Batch Mixing Cooker, Raw Ingredients, Refractometer, Storage Tank, Packaging Machines, Sterilized Packing Material, Cartons, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Various Types Of Sanitisers And Disinfectants, Trash Bins For Waste Material Disposal, Equipment For Cleaning, Procedural Manual For Reference	

Module 6: Production and Post-Production Activities of Various Types of Pickles

Mapped to FIC/N0209, v1.0

Terminal Outcomes:

- Discuss the process for preparing different types of pickles from fruits and vegetables.
- Explain various post-production activities for making pickles.

Duration (in hours): 20:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the different pickle recipes, emphasizing the importance of flavor balance, brine concentration, and spice blends. • Describe the procedure for preparing the brine solution used in pickle making, including the specific ratios and ingredients involved. • Discuss the various methods for the preservation of pickles, such as fermentation, pasteurization, and refrigeration, and their respective benefits and drawbacks. • Explain the intrinsic and extrinsic factors that can affect the spoilage of fruits and vegetables used in pickle making. • Describe the inspection techniques used to detect spoilages and damaged fruits and vegetables, along with the appropriate procedures for their disposal. • Discuss the appropriate packaging materials and techniques necessary to ensure the optimum shelf life and safety of pickles. • Elucidate the FSSAI regulations regarding permissible ingredients and additives for the production of pickles, focusing on compliance and safety standards. • Explain the FSSAI labelling requirements specific to pickles, including mandatory 	<ul style="list-style-type: none"> • Show how to prepare the spice mix using the measured quantity of spices and oil as per the formulation. • Demonstrate how to mix the spice mix with fermented fruits and vegetables to ensure consistency. • Show how to check the finished product to ensure it meets quality standards. • Demonstrate how to select and ensure packaging materials meet quality standards and regulatory requirements. • Show how to pack pickles in the selected packaging materials. • Demonstrate how to label packaging materials with necessary information per FSSAI standards. • Show how to ensure effective sealing of packaging materials to prevent contamination or damage. • Demonstrate how to sample pickles and coordinate with the quality-testing laboratory for analysis. • Show how to store packed pickles in a hygienic storage under recommended conditions. • Demonstrate how to clean and disinfect the work area, tools, equipment, and machinery.

<p>information and guidelines for product labeling.</p> <ul style="list-style-type: none"> • Describe the safe handling and storage practices of sanitizers and disinfectants used in pickle making, highlighting safety precautions. • Explain the appropriate procedure for the disposal of waste material generated during pickle production, ensuring environmental safety and compliance with regulations. 	<ul style="list-style-type: none"> • Show how to carry out basic repair and maintenance of tools, equipment, and machinery. • Demonstrate how to report any concerns to the supervisor for resolution. • Show how to ensure periodic maintenance of tools, equipment, and machinery. • Demonstrate how to carry out appropriate documentation concerning pickle production. • Show how to dispose of waste following the organizational procedure.
---	---

Classroom Aids

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Water Tank, Spraying System, Drying Line Conveyor, Sorting Line Conveyor, Peeling Machine, Steam Jacketed Kettle, Salinometer, Crusher/Mill, Pulper, Grinding Machine, Pickle Making Machine, Container, Filling Machine, Batch Mixing Cooker, Raw Ingredients, Refractometer, Storage Tank, Packaging Machines, Sterilized Packing Material, Cartons, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Various Types Of Sanitisers And Disinfectants, Trash Bins For Waste Material Disposal, Equipment For Cleaning, Procedural Manual For Reference

Module 7: Carry out Production of Jam, Jelly and Ketchup

Mapped to FIC/N0210, v1.0

Terminal Outcomes:

- Discuss the stages involved in the production of jam, jelly and ketchup.
- Demonstrate the tasks to be performed for producing jam, jelly and ketchup.

Duration (in hours): 20:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the FSSAI food safety and hygiene standards applicable to jam, jelly, and ketchup production, emphasizing regulatory compliance and safety protocols. • Describe the suitable types of fruits and vegetables for jam, jelly, and ketchup, considering their specific qualities and suitability for each product. • Explain the production processes and formulations for making jam, jelly, and ketchup, covering preparation techniques and key ingredients. • Elucidate the methods for washing fruits and vegetables before their use in jam, jelly, and ketchup production, focusing on hygiene and preparation standards. • Discuss the role of sugar and pectin in jam and jelly production, emphasizing their functions in preservation, texture, and gel formation. • Explain the processing techniques for preparing fruits and vegetables in jam, jelly, and ketchup production, from washing to cooking and pureeing. • Describe the importance of using sterilized equipment and containers in jam, jelly, and ketchup production to maintain product safety and quality. • Discuss the canning and pasteurization methods used to ensure safety and shelf stability in the production of jam, jelly, 	<ul style="list-style-type: none"> • Show how to check the quantity and quality of fruits and vegetables received from suppliers to ensure they meet order specifications and standards. • Demonstrate how to wash, inspect, and sort fruits and vegetables for damage or spoilage. • Show how to rinse, grade, peel, wash, and cut fruits and vegetables to the required size. • Demonstrate how to destone or de-seed fruits and vegetables using appropriate methods and dispose of waste in accordance with regulations. • Show how to pulp fruits and vegetables using a pulping machine or tools, extract juice, and refine pulp and juice with a sieving machine. • Demonstrate how to check and sample fruit pulp, juice, and cooked products for quality analysis with the lab. • Show how to cook measured quantities of fruit pulp and juice at recommended temperatures with continuous stirring to prepare jam and jelly. • Demonstrate how to prepare pectin solution and add ingredients like sugar, pectin, flavoring, and coloring agents to fruit pulp and juice as per the formulation. • Show how to cook measured quantities of tomato pulp/puree at recommended temperatures with continuous stirring to prepare ketchup.

<p>and ketchup.</p> <ul style="list-style-type: none"> • Explain the use of permissible ingredients, additives, and quality requirements in accordance with regulatory standards for jam, jelly, and ketchup production. 	<ul style="list-style-type: none"> • Demonstrate how to add ingredients like sugar, salt, spice powder, and vinegar to tomato pulp/puree as per the formulation and ensure proper cooking. • Show how to sample and coordinate the quality analysis of ketchup with the lab.
<p>Classroom Aids</p>	
<p>Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films</p>	
<p>Tools, Equipment and Other Requirements</p>	
<p>Fruit Washer, Peeler, Fruit Pulper, Juice Extractor, Clarifier, Filter, Pasteurizer, Steam Jacketed Kettles, Packaging Machines, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, sanitizer</p>	

Module 8: Carry out Packing and Post-production Activities for Jam, Jelly and Ketchup

Mapped to FIC/N0210, v1.0

Terminal Outcomes:

- Explain the process of filling and packing jam, jelly, and ketchup into containers.
- Describe the importance of post-production cleaning and regular maintenance of equipment used in jam, jelly, and ketchup production.

Duration (in hours): 10:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the types and categories of packaging materials used in the production of jam, jelly, and ketchup. • Explain the varieties of packaging machineries employed in the food processing industry for jam, jelly, and ketchup. • Describe the storage procedures for raw materials, packaging materials, and finished goods in a food processing facility. • Discuss the food laws and regulations governing product, packaging, and labelling in the food processing industry. • Describe the specific regulations outlined by the Food Safety and Standards Authority of India (FSSAI) concerning permissible ingredients and additives in the production of jam, jelly, and ketchup. • Elucidate the FSSAI guidelines on hygienic practices and safety measures necessary for the production of jam, jelly, and ketchup to ensure food safety and prevent contamination. 	<ul style="list-style-type: none"> • Show how to select and ensure cleanliness of packaging materials for jam, jelly, and ketchup. • Demonstrate how to fill packaging materials with jam, jelly, and ketchup while minimizing air exposure and maintaining recommended headspace. • Show how to seal packaging materials appropriately after filling to ensure product integrity. • Demonstrate how to pasteurize packed jam, jelly, and ketchup at recommended temperatures for extended shelf life. • Show how to cool packed jam, jelly, and ketchup following appropriate methods. • Demonstrate how to label packed jam, jelly, and ketchup in compliance with FSSAI regulations. • Show how to inspect packaging for leaks, damage, and proper labeling. • Demonstrate how to store packed jam, jelly, and ketchup in hygienic conditions at recommended temperatures and humidity. • Show how to clean, disinfect, and maintain tools, equipment, and machinery using recommended agents and methods.

	<ul style="list-style-type: none"> • Demonstrate how to report concerns to supervisors and perform basic maintenance of tools and machinery. • Show how to ensure periodic maintenance of tools and machinery as per manufacturer’s instructions. • Demonstrate how to document jam, jelly, and ketchup production activities appropriately. • Show how to dispose of waste following organizational procedures.
Classroom Aids	
Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Fruit Washer, Peeler, Fruit Pulper, Juice Extractor, Clarifier, Filter, Pasteurizer, Steam Jacketed Kettles, Packaging Machines, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, sanitizer	

Module 9: Carry out Process of Drying/ Dehydrating the Fruits and Vegetables

Mapped to FIC/N0118, v2.0

Terminal Outcomes:

- Explain how to wash fruits and vegetables properly.
- Describe the process of sorting, peeling, slicing, and blanching fruits and vegetables.
- Explain the method for drying fruits and vegetables under the sun.
- Explain the technique for freeze-drying fruits and vegetables.
- Discuss how to inspect, pack, and store dried/dehydrated fruits and vegetables.
- Describe the steps involved in carrying out post-production activities.

Duration (in hours): 20:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the basic principles of food microbiology and its importance in produce drying. • Describe different varieties of fruits and vegetables suitable for drying and their selection criteria, such as ripeness, texture, and flavour. • Discuss the methods for effectively cleaning, sanitizing, peeling, cutting, and blanching produce to remove contaminants and preserve quality. • Describe the production processes and techniques for drying and dehydrating fruits and vegetables, including hot air drying, freeze drying, and sun drying. • Explain the operation and use of commercial dehydrators, including optimal temperature, humidity levels, and airflow management for efficient drying. • Determine the drying duration and methods for measuring moisture content to ensure produce is adequately dried. • Describe the physical evaluation criteria for dried produce based on appearance, texture, and flavour. 	<ul style="list-style-type: none"> • Demonstrate how to check the weight and quality of fruits and vegetables received from the supplier/vendor based on appearance, colour, texture, maturity, etc. • Show how to fill the washing tank to the recommended level and immerse fruits and vegetables for washing. • Demonstrate how to transfer fruits safely from the washing tank to the washing line conveyor. • Show how to wash fruits and vegetables appropriately with chlorinated or ozonated water and rinse them thoroughly with fresh water. • Show how to sort fruits and vegetables, removing unsuitable ones like damaged or rotten items. • Demonstrate how to grade fruits and vegetables based on different sizes. • Show how to remove the peel or core of fruits and vegetables using appropriate methods. • Demonstrate how to prepare and apply a lye solution for skin or membrane removal from fruits and vegetables.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Discuss the appropriate packaging materials, sealing techniques, and labelling requirements to protect dried produce and extend shelf life. • Describe the optimal storage conditions and inventory management practices to maintain the quality and freshness of dried produce. • Discuss innovative techniques for drying produce, such as microwave-assisted drying, infrared drying, vacuum drying, and Modified Atmosphere Packaging (MAP). • Describe techniques for enhancing the flavour of dried produce, including the addition of natural flavours or sugar syrups. • Determine the applicable documentation requirements for drying and dehydrating processes. | <ul style="list-style-type: none"> • Show how to steam peel fruits and vegetables as needed. • Demonstrate how to chop, cut, or slice fruits and vegetables to specified sizes and shapes using suitable tools. • Show how to blanch various fruits and vegetables for optimal softening, checking adequacy visually and by texture. • Demonstrate how to apply Sulphur treatment to fruits and vegetables for preservation. • Show how to weigh, spread, and dry fruits and vegetables uniformly under sunlight or in a hot air dryer. • Demonstrate how to cool dried fruits and vegetables to maintain quality. • Show how to dry fruits and vegetables using a tunnel dryer while maintaining recommended parameters. • Demonstrate how to cool dried fruits and vegetables in a controlled environment. • Show how to set and maintain freezing room conditions for optimal preservation of fruits and vegetables. • Demonstrate how to freeze-dry fruits and vegetables under appropriate conditions. • Show how to check the quality of freeze-dried fruits and vegetables post-processing. • Demonstrate how to sort dried fruits and vegetables based on size, shape, colour, maturity, and variety. • Show how to pack dried or dehydrated fruits and vegetables using a packaging machine. • Demonstrate how to set packing quantities and use a date coding machine for batch details on packaging. |
|--|---|

	<ul style="list-style-type: none"> • Show how to label packed fruits and vegetables with required information using appropriate equipment. • Demonstrate how to sample packed products for quality analysis with the quality-testing lab. • Show how to store packed fruits and vegetables in hygienic conditions using suitable storage accessories. • Demonstrate how to clean, disinfect, and maintain tools, equipment, and machinery for fruit and vegetable processing. • Show how to conduct basic and periodic maintenance of tools, equipment, and machinery as per manufacturer's instructions. • Demonstrate how to document drying and dehydration processes for fruits and vegetables appropriately.
<p>Classroom Aids</p>	
<p>Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films</p>	
<p>Tools, Equipment and Other Requirements</p>	
<p>PH Meter (Digital), Thermometer (Digital), Beakers of different sizes, Conical flasks, Measuring cylinder, Measuring flask, Burrete of assorted sizes with burrete stands, Pipettes of assorted sizes, Glass funnels of assorted sizes, Test tubes with test tube stand, Glass rod, Petri dish with cover, Glass slides, Microscope, Brinometer, Hydrometer, Weighing balance (Digital)</p>	

Module 10: Carry out Production of Fruit Pulp from Various Fruits

Mapped to FIC/N0122, v2.0

Terminal Outcomes:

- Discuss the stages involved in the production of jam, jelly and ketchup.
- Demonstrate the tasks to be performed for producing jam, jelly and ketchup.

Duration (in hours): 20:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the types of fruits suitable for pulping and the production processes involved, including the appropriate process parameters. • Discuss different fruit varieties and their specific characteristics, such as taste, texture, and pulp yield. • Discuss hand extraction methods for small-scale production of fruit pulp. • Describe processes like pasteurization or sterilization to increase shelf life and preserve nutritional content and flavour of fruit pulp, with techniques like cold pressing for fruits such as citrus. • Explain the importance of homogenization in ensuring consistent texture and preventing separation in fruit pulp. • Discuss safe use of preservatives to maintain quality and prevent spoilage of fruit pulp. • Elucidate techniques for freezing and canning fruit pulp to extend shelf life and ensure quality during storage and distribution. • Describe physical evaluation and microbiological testing of fruit pulp to ensure it is free from harmful microorganisms. • Discuss applicable food safety regulations, labeling requirements, and storage conditions for processed and 	<ul style="list-style-type: none"> • Show how to check the weight and quality of fruits based on appearance, colour, texture, and maturity. • Demonstrate how to pre-cool fruits and use ethylene for ripening. • Show how to maintain air circulation and control CO₂ and ethylene levels during fruit ripening. • Demonstrate how to check the quality of ripened fruits and take corrective measures. • Show the proper methods for washing and sanitizing fruits to remove dirt, pesticides, and microorganisms. • Demonstrate how to sort and remove unsuitable fruits. • Show the techniques for efficiently peeling, coring, and removing seeds or pits using mechanical equipment like pulping machines, crushers, and grinders. • Demonstrate how to chop, cut, slice, de-stone fruits, and dispose of waste. • Show how to pulp fruits, sieve pulp, and check for seeds and fibre using the pulping machine or other appropriate tools and equipment. • Demonstrate how to pre-cook fruit pulp, check texture, and remove black specks. • Show how to coordinate quality testing, remove air, and evaporate fruit pulp.

<p>packed fruit pulp.</p> <ul style="list-style-type: none"> • Describe new technologies relevant to fruit pulp production, such as enzymatic treatment and biotechnology. • Explain the use and basic maintenance of equipment used in fruit pulping, such as pulping machines, pasteurizers, sterilizers, and packaging machines. • Discuss appropriate packaging materials to protect fruit pulp from contamination and spoilage. • Elucidate types and categories of packaging materials suitable for packing processed fruit pulp, including aseptic packaging. 	<ul style="list-style-type: none"> • Demonstrate how to sterilize and store fruit pulp before packing. • Show the techniques for sealing and packaging fruit pulp to maintain quality during storage and transportation. • Demonstrate how to check weight, label, and store packed fruit pulp. • Show how to fill sterilized cans with pre-cooked/pre-heated fruit pulp. • Demonstrate how to vacuum seal, sterilize, cool, dry, and label fruit pulp cans. • Show how to store fruit pulp cans and report discrepancies. • Demonstrate the procedures for waste disposal generated during fruit pulping, quality parameters, and use of packing machinery for fruit pulp. • Show how to perform basic repair and maintenance of tools, equipment, and machinery. • Demonstrate how to ensure periodic maintenance of tools, equipment, and machinery. • Show how to document the pulping, packing, canning, and storage of fruit pulp.
--	--

Classroom Aids

Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Washing tank, Washing line conveyor, High-pressure spray, Peeler, Corer, Open spray system, Chopper, Slicer machine, Cutter, Collection tank, Steam jacketed kettle or Pre-cooking tank, De-aeration tank, Evaporator, Sterilization tank, Product surge tank, Plastic liners, Drums, Cartons, Aseptic bag, Reformer, Flanger, Seamer, Can body beader, and Embossing machines, Machine-lift, Mechanical conveyor, Packaging machine.

Module 11: Carry Out Sorting and Grading of the Produce

Mapped to FIC/N0129, v3.0

Terminal Outcomes:

- Explain how to wash and dry the produce.
- Describe the process of sorting and grading the produce.

Duration (in hours): 20:00	Duration (in hours): 50:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the basics of food microbiology. • Describe the laws and regulations for food handling, safety, packaging, and labelling. • Explain the APEDA and AgMark standards for agricultural and processed food products. • Describe the maturity index of different fruits and vegetables. • Discuss the factors affecting the maturity of fruits and vegetables. • Discuss the variety, characteristics, and quality of different types of fruits and vegetables. • Explain the washing process and chemicals used for washing produce. • Elucidate the benefits and process of Ozone washing of fruits and vegetables. • Explain the pack house handling procedures for produce. • Describe new technologies like air blowing, cameras, optical sorters, NIR spectroscopy, laser, and X-ray sorting machines. • Discuss the different grade designations of agricultural produce according to AgMark. • Describe the use and maintenance of machinery for sorting and grading produce. 	<ul style="list-style-type: none"> • Show how to retrieve agricultural produce from the warehouse/cold storage. • Demonstrate how to check the quality of produce based on physical and sensory parameters. • Show how to set controls for the float/water tank and pump water to the required level for washing produce. • Show how to set conveyor controls, such as speed and height, to lift the agricultural produce from the floor, racks, or containers. • Demonstrate how to dump the produce in the float/water tank to remove impurities. • Show how to adjust the pressure of the spraying system to remove chlorine from the surface of fruits and vegetables. • Demonstrate how to set appropriate controls for the drying line conveyor and pass the washed fruits and vegetables through the drying tunnel. • Show how to set appropriate controls for the brushing conveyor and clean the produce unsuitable for water treatment. • Demonstrate how to set the appropriate controls for the dryer and dry the produce. • Show how to apply waxing treatment depending on the type of produce to

<ul style="list-style-type: none"> • Elucidate methods to identify and handle rejected produce. • Discuss the physical and sensory characteristics of agricultural produce. • Describe different grades of agricultural produce. • Explain the process of diluting and concentrating chlorine water and how to use it in the recommended quantity in the water to kill pathogenic and non-pathogenic micro-organisms. • Describe how to operate and control the conveyor belt, brushing conveyor, and grading line. • Discuss the optimum use of a high-pressure spray system and dryer. • Explain the parameters for quality assessment during the sorting and grading of fruits and vegetables. • Describe the process of waxing fruits and vegetables. • Explain how to calibrate an electronic colour sorter. • Discuss the process of randomized and systematic sampling of produce. 	<p>reduce water loss and improve appearance.</p> <ul style="list-style-type: none"> • Show how to identify and remove severely damaged produce. • Demonstrate how to set the mesh inside the mechanical sieving machine to separate unwanted material from the produce. • Show how to remove dry foliage from onion and garlic bulbs and sort them by size using measurement rings of different diameters. • Demonstrate how to calibrate the electronic colour sorter to sort produce based on colour and record the readings. • Show how to grade produce based on diameter, length, weight, and size using line conveyors with mesh screens, diverging belts, rollers, or weight-sensitive trays. • Demonstrate how to coordinate the analysis of quality parameters by sending samples to the quality lab, as required. • Show how to collect sorted and graded produce by placing baskets, tubs, or crates below the discharge outlets of each lane or machine. • Demonstrate how to identify and report malfunctions or discrepancies to the supervisor and take appropriate corrective action, as instructed. • Show how to carry containers with sorted and graded produce to the packaging area safely.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	

Pump, Water, Spray System, Sorting Line Conveyor, Grading Line Conveyor, Electronic Sorting Machine, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual

Module 12: Carry Out Packing, Storing and Post-Production Activities

Mapped to FIC/N0129, v3.0

Terminal Outcomes:

- Discuss how to pack and store the produce.
- Elucidate the steps to carry out post-production activities.

Duration (in hours): 10:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Elucidate the importance of labelling produce and the information included on labels. • Describe different packaging materials and the operation of packing machines for fresh produce. • Explain the preventive maintenance of relevant tools, equipment, and machinery. • Explain the methods for organizing pallets in the storage area. • Discuss storage procedures for incoming produce, packaging materials, and packed produce. 	<ul style="list-style-type: none"> • Demonstrate how to carry out primary and secondary packaging of the produce, as applicable. • Show how to label the produce with necessary information according to applicable FSSAI guidelines. • Demonstrate how to store packed produce in a clean and hygienic storage area, maintaining recommended temperature and humidity. • Show how to use appropriate storage accessories, such as cartons, crates, gunny bags, and mesh, to store packed produce. • Demonstrate how to follow organizational procedures to dispatch packed produce to their destination using a suitable transportation method. • Demonstrate how to carry out basic repair and maintenance of the tools, equipment, and machinery. • Show how to ensure periodic maintenance of the tools, equipment, and machinery according to the manufacturer’s instructions. • Show how to carry out appropriate documentation concerning the sorting, grading, packing and storage of fruits and vegetables.
Classroom Aids	

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Packaging Machine, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual

Module 13: Carry Out Preparation and Production of Biscuits

Mapped to FIC/N5022, v1.0

Terminal Outcomes:

- Explain the process of selecting and preparing ingredients for biscuit production.
- Describe the steps involved in preparing the dough for biscuits.
- Discuss the methods used to produce and pack biscuits efficiently.

Duration (in hours): 15:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the types of raw materials and ingredients required for making various types of biscuits and their chemical properties. • Describe the key steps in the baking process, including mixing, proofing, baking, cooling, and packaging. • Determine the role of process parameters and formulations in the production of different baked products. • Explain the reactions that occur during mixing, fermentation, and baking in biscuit production. • Discuss the tools and equipment used for mixing and preparing ingredients, such as industrial mixers, dough dividers, and proofing cabinets. • Describe the use and maintenance of baking equipment, including ovens and cooling systems. • Elucidate the benefits of automation in the food industry, including the role of PLCs and HMIs. • Explain the precautions to be taken when preparing bakery products, including the use of PPE. • Discuss the importance of ERP and SCADA systems in monitoring product quality during production. 	<ul style="list-style-type: none"> • Show how to check the production order and formulation for the product and select raw materials based on the criteria for the batch. • Demonstrate how to assess the quality of ingredients based on appearance, colour, odour, and texture to ensure they meet the standards. • Show how to weigh and take the correct amount of ingredients as per the product formulation. • Demonstrate how to sift flour using a flour sifter machine to remove lumps. • Show how to mix the ingredients with flour at the recommended temperature and speed, and knead the dough manually or using a machine, ensuring the proper dough temperature. • Demonstrate how to check the viscosity and quality of the dough to ensure conformance to specifications. • Show how to extrude and laminate the dough, taking appropriate precautions. • Demonstrate how to sheet, roll, and cut the dough to the required thickness and shape for biscuits. • Show how to mould dough into specific designs, such as for sandwich biscuits. • Demonstrate how to load the cut or moulded dough pieces into industrial

<ul style="list-style-type: none"> • Describe the quality parameters and standards to be maintained for bakery products, particularly biscuits. • Explain the various types of packaging materials used for packing different types of biscuits. 	<p>ovens and bake biscuits at the appropriate temperature and duration.</p> <ul style="list-style-type: none"> • Show how to cool baked biscuits to prevent moisture buildup and maintain texture. • Demonstrate how to coat biscuits with toppings, like chocolate or sugar, and sandwich biscuits with fillings such as cream or jam. • Show how to check biscuits for uniformity in size, shape, colour, and texture, and remove defective ones. • Demonstrate how to sort, align, and pack biscuits into appropriate packaging, ensuring moisture protection. • Show how to label the packaging with necessary information and store packed biscuits in a controlled environment to maintain freshness.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Various tools and equipment (such as mixer, kneader, cutter, slicer, moulder, oven, packaging and sealing machine, shifter, etc.) Packaging material: carton, box, duplex, laminates, decorating items, etc.	

Module 14: Carry Out Post-Production Activities of Biscuits

Mapped to FIC/N5022, v1.0

Terminal Outcomes:

- Describe the procedures for carrying out post-production activities in baking operations.

Duration (in hours): 05:00	Duration (in hours): 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the FSSAI food safety and hygiene standards relevant to baking operations. • Explain the basics of supply chain management, including ingredient sourcing and inventory management in bakery production. • Describe the essential aspects of business management, such as production planning, cost control, and workforce management for bakery operations. • Discuss relevant environmental protection and sustainability practices in the food industry. • Explain the documentation requirements for maintaining compliance in bakery operations. 	<ul style="list-style-type: none"> • Show how to clean and disinfect the work area, tools, equipment, and machinery using the recommended cleaning agents. • Show how to carry out basic repair and maintenance of tools, equipment, and machinery. • Demonstrate how to report discrepancies or concerns to the supervisor for immediate resolution. • Show how to ensure periodic maintenance of tools, equipment, and machinery as per the manufacturer’s instructions. • Demonstrate how to document baking operations properly and accurately.
Classroom Aids	
Training Kit - Facilitator’s Guide, Participant’s Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Various tools and equipment (such as mixer, kneader, cutter, slicer, moulder, oven, packaging and sealing machine, shifter, etc.) Packaging material: carton, box, duplex, laminates, decorating items, etc.	

Module 15: Produce Whole Spices, Seasonings and Curry Powder

Mapped to FIC/N8517, v1.0

Terminal Outcomes:

- Discuss the process for preparing different whole spices, seasonings, spice powder and curry powder.
- Demonstrate the standard work practices followed to produce whole spices, seasonings, spice powder and curry powder.

Duration (in hours): 15:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the characteristics of different spices, focusing on their aroma, flavor profiles, and culinary uses across various cuisines. • Describe the different grades of raw materials used in spice, curry powder, and seasoning production, emphasizing quality attributes and sourcing considerations. • Explain the nutritional benefits of various spices and seasonings, detailing their potential health-promoting properties and dietary uses. • Discuss how different spices and seasoning blends are utilized in various cuisines around the world, highlighting cultural influences and flavor combinations. • Elucidate the sequence of operations involved in producing various types of spices, curry powder, and seasonings, from raw material preparation to packaging. • Explain the importance and process of cleaning whole spices before processing, ensuring purity and hygiene standards in spice production. • Describe the appropriate methods for sterilizing spices, curry powder, and 	<ul style="list-style-type: none"> • Show how to clean whole spices thoroughly to remove dirt and foreign particles. • Demonstrate the appropriate drying method for whole spices. • Show how to cut and sterilize whole spices following standard procedures. • Demonstrate measures to ensure food safety and prevent contamination during spice processing. • Show how to check the quality of processed whole spices based on size, moisture content, and colour retention. • Demonstrate sorting and grading of whole spices based on production requirements. • Show how to roast whole spices at recommended temperatures for the appropriate duration. • Demonstrate grinding whole spices into fine powder or coarse granules. • Show how to cool ground spices adequately. • Demonstrate sieving ground spices and curry powder to achieve uniform particle size. • Show how to blend selected spices to produce curry powder with consistent flavour.

<p>seasonings to ensure microbiological safety and shelf stability.</p> <ul style="list-style-type: none"> • Discuss the appropriate methods for drying spices to prevent spoilage and enhance flavor concentration, considering different drying techniques and their impacts. • Describe the suitable grinding techniques for spices to produce powders while preserving their aromatic properties and texture. • Discuss how to blend different spices to create curry powders and seasoning mixes that balance flavor profiles and meet consumer preferences. • Explain the appropriate packaging materials and methods used to preserve freshness, prevent contamination, and extend the shelf life of spices and seasonings. • Discuss the relevant quality standards and regulations governing the production and packaging of spices and seasonings, ensuring compliance and consumer safety. • Elucidate the sensory evaluation methods used to assess the quality and characteristics of spices, curry powder, and seasonings, including aroma, taste, and texture. • Discuss consumer demand and preferences for spices in different regions, considering cultural influences, culinary trends, and market dynamics. 	<ul style="list-style-type: none"> • Demonstrate sterilization of spices and curry powder to remove microbial contaminants. • Show how to dry spices and curry powder to appropriate moisture levels. • Demonstrate grading of spices and curry powder based on fineness, texture, aroma, and flavour. • Show how to mix ingredients for seasoning production, including whole spices, salt, oleoresins, and flavourings. • Demonstrate methods to identify and remove impurities from seasoning mixtures. • Show how to dry seasoning mixtures to prevent mould growth and preserve flavours. • Demonstrate grinding dried ingredients to achieve appropriate fineness for seasoning. • Show how to sieve ground seasoning to achieve desired grades (fine, medium, coarse). • Demonstrate sampling and quality analysis coordination with the quality-testing laboratory for seasonings.
--	---

Classroom Aids

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Grinder, mills, pulveriser, sterilization chamber, vacuum dryer chamber, dryer, roasting machine, sifter, mortar & pestle, pounding machine, de-stoner, spice blender, protective gloves, head caps, aprons, safety goggles, safety boots, mouth masks, sanitizer, safety manual

Module 16: Carry Out Packing and Post-Production Maintenance of Equipment

Mapped to FIC/N8517, v1.0

Terminal Outcomes:

- Explain the procedure of wrapping and labelling of products and post-production cleaning and maintenance of equipment.
- Demonstrate the technique to package the finished products.

Duration (in hours): 15:00	Duration (in hours): 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the appropriate packaging materials for spices, curry powder, and seasonings. • Describe the process of packing spices, curry powder, and seasonings and the precautions to be taken. • Explain the labelling requirements for spices, curry powder, and seasonings. • Discuss the importance of following applicable FSSAI regulations in spice, curry powder, and seasoning production. • Describe different types of packaging defects and appropriate remedial measures. • Discuss measures to minimize hazards in spice, curry powder, and seasoning production. • Explain spice processing methods to reduce environmental impact. • Discuss the impact of microbial contamination and prevention methods in spice production. • Elucidate record-keeping and documentation requirements for spice, curry powder, and seasoning production. • Discuss safe disposal methods for waste generated during production. 	<ul style="list-style-type: none"> • Display how to load the desired packaging material on the machine appropriately to prepare for packaging. • Display how to load different spices on the machine for packaging. • Show how to set controls of the packaging machine and monitor the process. • Demonstrate the procedure to record information of finished products details as per FSSAI regulations of packaging and labelling, 2011. • Show how to check for presence of metallic substances in the packaged finished products. • Show how to report information such as variances in product characteristics to the supervisor accurately. • Demonstrate the procedure to verify and record production details. • Show the appropriate practices to transfer the products to quality labs. • Demonstrate the procedure of cleaning and inspecting work area, tools and equipment after production. • Show how to record and report equipment faults to the concerned department/supervisor as per organizational practice

Classroom Aids

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Packaging machine, labels, packaging material, protective gloves, head caps, aprons, safety goggles, safety boots, mouth masks, various types of sanitisers and disinfectants, trash bins for waste material disposal, equipment for cleaning, procedural manual for reference

Module 17: Implement Personal Hygiene and Good Manufacturing Practices

Mapped to FIC/N9906, v1.0

Terminal Outcomes:

- Discuss the importance of personal hygiene and GMP at the workplace
- Demonstrate the tasks to be performed for ensuring personal hygiene and GMP practices at the workplace.

Duration (in hours): 05:00	Duration (in hours): 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Define hazards and risks. • Discuss the various types of health and safety equipment available in an organisation and the methods for obtaining them. • Discuss the organisational health and safety policies and procedures. • Discuss site relevant documented procedure for Personal Hygiene and Visitor/ Contractor rules. • Explain work instructions at levels of employee inside a food manufacturing site. • Discuss how to conduct timely planning and participation of relevant training and awareness sessions on personal hygiene, GMP and related topics. • Explain the importance of timely medical examination from a prescribed and authorized doctor and to comply with the guidelines of Schedule IV as described in Food Safety Standard Authority of India (FSSAI) guidelines. • State how to follow a site relevant documented procedure and area wise work instructions for Good Manufacturing Practices (GMP) to be followed on the site. • List validated Do's & Don'ts inside a food manufacturing firm. • State process flow charts, HACCP summary plan and critical process parameters in each and respective areas of the production line. • Explain how to identify the material 	<ul style="list-style-type: none"> • Demonstrate the steps to be performed for implementing good manufacturing practices (GMP). • Demonstrate how to follow work instructions at levels of employee inside a food manufacturing site and ensure that the relevant instructions are well communicated and being followed at the fixed timelines. • Show how to fill data in daily monitoring checklist related to personal hygiene, food safety and GMP. • Demonstrate the process to follow man and materials movement throughout the production facility, to restrict unwanted hazards to cross contaminate the products which are being manufactured in the facility. • Show how to tag and number all the equipment, machinery, tools, and other processing aids to keep a proper traceability of the product being manufactured and handled at site. • Demonstrate process of record keeping and documentation such as Daily Monitoring Sheets, Batch Traceability Records, machine records, product parameters, process control parameters etc.

requirements such as manufacturing equipment's, Utensils and other processing aids, cleaning chemicals, cleaning work instructions in all the relevant areas of manufacturing facility.

- Define the Allergens, their risks and the allergen requirements.
- State the relevance of guidelines in manufacturing area and how training evaluation will be implemented.
- Explain the process of audits and ways to address the aspects of Good Manufacturing Procedures, personal hygiene and food safety.

Classroom Aids

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

GMP format and guidelines, allergen manual, personal hygiene guidelines, etc.

Module 18: Apply Food Safety Practices at Workplace

Mapped to FIC/N9906, v1.0

Terminal Outcomes:

- List the food safety practices at the workplace and the ways to implement them.
- Demonstrate the steps to be followed to implement food safety procedures effectively.

Duration (in hours): 05:00	Duration (in hours): 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the various types of health and safety hazards present in the environment. • Discuss the possible causes of risk, hazard or accident at the workplace. • Elucidate the standard practices and precautions used to control and prevent risks, hazards and accidents at the workplace. • Explain requirements to maintain updated facilities, equipment and tool to minimize the risks associated with the products being handled at the site. • State the importance of using protective equipment and clothing for specific tasks and work conditions. • Discuss the role of organisational protocols in preventing accidents and hazards. • Discuss the significance of various types of hazard and safety signs. • Explain FSSAI Schedule IV requirements related to: Pest Control, Cleaning and Sanitation, Utilities, Waste Disposal, Prevention of Cross Contamination, allergen management, corrective action, preventive actions, food operation control etc. • Discuss the relevance of checking critical control points and product parameters. • Explain importance of record keeping and documentation such as daily monitoring sheets, cleaning sheets, parameters etc. • Discuss how to report any food safety and GMP issue to supervisor, if any. 	<ul style="list-style-type: none"> • Show how to apply appropriate techniques to deal with hazards safely and appropriately. • Demonstrate the steps for checking critical control points and product parameters. • Show how to record keeping and documentation such as daily monitoring sheets, cleaning sheets, parameters etc. • Demonstrate appropriate ways to respond to an accident situation or medical emergency promptly and appropriately. • Demonstrate the steps to be followed during emergency and evacuation procedure.

Classroom Aids

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Helmet, gloves, rubber mat, ladder, neon tester, leather or asbestos gloves, flame proof aprons, flame proof overalls buttoned to neck, cuff less (without folds) trousers, reinforced footwear, helmets/hard hats, cap and shoulder covers, ear defenders/plugs, safety boots, knee pads, particle masks, glasses/goggles/visors, hand and face shields, machine guards, residual current Devices, shields, dust sheets, respirator.

Module 19: Employability Skills (30 Hours)

Mapped to DGT/VSQ/N0101, v1.0

Duration: 30:00

Key Learning Outcomes

Introduction to Employability Skills Duration: 1 Hour

After completing this programme, participants will be able to:

1. Discuss the importance of Employability Skills in meeting the job requirements

Constitutional values - Citizenship Duration: 1 Hour

2. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.

3. Show how to practice different environmentally sustainable practices

Becoming a Professional in the 21st Century Duration: 1 Hour

4. Discuss 21st-century skills.

5. Display a positive attitude, self-motivation, problem-solving, time management skills and continuous learning mindset in different situations.

Basic English Skills Duration: 2 Hours

6. Use appropriate basic English sentences/phrases while speaking

Communication Skills Duration: 4 Hours

7. Demonstrate how to communicate in a well-mannered way with others.

8. Demonstrate working with others in a team

Diversity & Inclusion Duration: 1 Hour

9. Show how to conduct oneself appropriately with all genders and PwD

10. Discuss the significance of reporting sexual harassment issues in time

Financial and Legal Literacy Duration: 4 Hours

11. Discuss the significance of using financial products and services safely and securely.

12. Explain the importance of managing expenses, income, and savings.

13. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws

Essential Digital Skills Duration: 3 Hours

14. Show how to operate digital devices and use the associated applications and features, safely and securely

15. Discuss the significance of using the internet for browsing, and accessing social media platforms, safely and securely

Entrepreneurship Duration: 7 Hours

16. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges

Customer Service Duration: 4 Hours

17. Differentiate between types of customers

18. Explain the significance of identifying customer needs and addressing them

19. Discuss the significance of maintaining hygiene and dressing appropriately

Getting ready for Apprenticeship & Jobs Duration: 2 Hours

20. Create a biodata

21. Use various sources to search and apply for jobs

22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview

23. Discuss how to search and register for apprenticeship opportunities

Module 20: On-the-Job Training

Mapped to Multi Skill Technician (Food Processing)

Mandatory Duration: 90:00	Recommended Duration: 00:00
Location: On-Site	
<p>Terminal Outcomes</p> <ul style="list-style-type: none"> • Show the standard practices to be followed to plan for production. • Demonstrate the tasks to be performed to prepare for the production process. • Show the procedures for receiving, washing, sorting, and slicing fruits to prepare them for juice extraction. • Demonstrate the techniques used to extract juice from various fruits, ensuring maximum yield and quality. • Demonstrate the process of pasteurizing fruit juice to ensure safety and prolong shelf life. • Demonstrate how to clarify fruit juice using appropriate methods and equipment. • Show the process of preparing squash from fruit juice. • Show the process of filling, packing and storing juice and squash. • Show how to pack, seal, and label juice and squash according to specified procedures. • Demonstrate the post-production activities in accordance with health and safety guidelines • Demonstrate the process for preparing different types of pickles, pastes and murabba from fruits and vegetables. • Demonstrate the stages involved in the production of jam, jelly and ketchup. • Show how to wash fruits and vegetables properly. • Show the process of sorting, peeling, slicing, and blanching fruits and vegetables. • Demonstrate the method for drying fruits and vegetables under the sun. • Demonstrate the technique for freeze-drying fruits and vegetables. • Show how to inspect, pack, and store dried/dehydrated fruits and vegetables. • Demonstrate the steps involved in carrying out post-production activities. • Show the stages involved in the production of jam, jelly and ketchup. • Demonstrate the tasks to be performed for producing jam, jelly and ketchup. • Show the various methods used in canning fruits and vegetables. • Demonstrate the different processes carried out during canning of fruits and vegetables • Show the process of sorting and grading the produce • Demonstrate how to pack and store the produce. • Demonstrate how to produce the various types of biscuits. • Show the post production activities for making biscuits. • Demonstrate the process for preparing different whole spices, seasonings, spice powder and curry powder. 	

- Demonstrate the standard work practices followed to produce whole spices, seasonings, spice powder and curry powder.
- Show the procedure of wrapping and labelling of products and post-production cleaning and maintenance of equipment.
- Demonstrate the technique to package the finished products.
- Show the importance of personal hygiene and GMP at the workplace
- Demonstrate the tasks to be performed for ensuring personal hygiene and GMP practices at the workplace.
- Demonstrate the steps to be followed to implement food safety procedures effectively.

Heavy Equipment/Machinery and other Requirements:

Steam Jacketed Kettle, Pasteurizer, Sterilizer, Filling Machine, Sealing Machines, Labelling Machines, Crusher/Mill, Pickle Making Machine, Batch Mixing Cooker, De-Aeration Tank, Evaporator, Mechanical Conveyor, Electronic Sorting Machine, Sterilization Chamber and Vacuum Dryer Chamber.

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
M.Sc./ M.Tech./ M.E.	Food Technology or Food Engineering	2	Fruit and vegetable industry/bakery industry	0	Training of Multi Skill Technician	
B.Sc. or graduate/ B.Tech./ B.E.	Food Technology or Food Engineering	3	Fruit and vegetable industry/bakery industry	0	Training of Multi Skill Technician	
B.Sc.	Food Science and Quality Control	4	Fruit and vegetable industry/bakery industry	0	Training of Multi Skill Technician	
Diploma	Food Technology or Food Engineering	4	Fruit and vegetable industry/bakery industry	2	Training of Multi Skill Technician	
Diploma / Hotel Management/ Certificate course	Fruits and Vegetables Processing	5	Fruit and vegetable industry/bakery industry	0	Training of Multi Skill Technician	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Multi Skill Technician (Food Processing)" mapped to QP: "FIC/Q9007, v3.0". Minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2601, v2.0". The minimum accepted score as per MEPSC guidelines is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B.Sc./ Diploma	Hotel management/ Food Technology/ Home Science/ Agriculture/ Post Harvest Processing	5	Food Processing/ Agricultural Industry	3	Assessment of Multi Skill Technician	
B.Tech./ B.E.	Food Technology / Food Engineering/ Agriculture Engineering	3	Food Processing/ Agricultural Industry	2	Assessment of Multi Skill Technician	
M.Sc./ M.E./ M.Tech.	Food Technology / Food Engineering/ Agriculture Engineering	2	Food Processing/ Agricultural Industry	1	Assessment of Multi Skill Technician	
MBA	Agri Business Management/ FTM	2	Food Processing/ Agricultural Industry	1	Assessment of Multi Skill Technician	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Multi Skill Technician (Food Processing)” mapped to QP: “FIC/Q9007, v3.0”. Minimum accepted score is 80%.	Certified for the Job Role: “Assessor (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, v2.0”, with a minimum score of 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.

Assessment will be based on the concept of Independent Assessors empanelled with Assessment Agencies, identified, selected, trained and certified on Assessment techniques. These Assessors would be aligned to assess as per the laid down criteria.

Assessment Agency would conduct assessment only at the training centres of Training Partner or designated testing centers authorized by FICSI.

Ideally, the assessment will be a continuous process comprising of three distinct steps:

- A. Mid-term assessment
- B. Term/Final Assessment

Each National Occupational Standard (NOS) in the respective QPs will be assigned weightage. There in each Performance Criteria in the NOS will be assigned marks for theory and/or practical based on relative importance and criticality of function.

This will facilitate preparation of question bank / paper sets for each of the QPs. Each of these papers sets/question banks created by the Assessment Agency will be validated by the industry subject matter experts through FICSI, especially with regard to the practical test and the defined tolerances, finish, accuracy etc.

The following tools are proposed to be used for final assessment:

- i. Written Test: This will comprise of (i) True/False Statements, (ii) Multiple Choice Questions, (iii) Matching Type Questions. Online system for this will be preferred.
- ii. Practical Test: This will comprise a test job to be prepared as per project briefing following appropriate working steps, using necessary tools, equipment and instruments. Through observation it will be possible to ascertain candidate's aptitude, attention to details, quality consciousness etc. The end product will be measured against the pre-decided MCQ filled by the Assessor to gauge the level of his skill achievements.
- iii. Structured Interview: This tool will be used to assess the conceptual understanding and the behavioural aspects as regards the job role and the specific task at hand.

On the Job:

1. Each module which covers the job profile of Multi-Skill Technician will be assessed separately.
2. The candidate must score 70% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT
 - Answer Sheets of Question Banks
 - Assessing the Logbook entries of Trainees at Employer location
 - Employer Performance Feedback.

4. Assessment of each Module will ensure that the candidate is able to:

- Carry out production of fortified food
- Work effectively and efficiently as per schedules and timelines.
- Escalate the problem to appropriate authority.
- Implement safety practices.
- Optimize the use of resources to ensure less wastage and maximum conservation.

References

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 it 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
NCVET	National Council for Vocational Education and Training
NVEQF	National Vocational Educational Qualification Framework
FICSI	Food Industry Capacity & Skill Initiative
QP	Qualification Pack
MC	Model Curriculum
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
NCO	National Classification of Occupations
ES	Employability Skills
HACCP	Hazard Analysis and Critical Control Points
FSSAI	Food Safety and Standards Authority of India
GMPs	Good Manufacturing Practices
GHP	Good Hygiene Practices
PPE	Personal Protective Equipment
SOP	Standard Operating Procedure
QMS	Quality Management System
FEFO	First Expiry First Out
FIFO	First In First Out
COP	Clean Out of Place
CIP	Clean In Place