



Model Curriculum

QP Name: Pickle Making Technician

QP Code: FIC/Q0102

QP Version: 1.0

NSQF Level: 3

Model Curriculum Version: 1.0

Food Industry Capacity and Skill Initiative (FICSI)
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Training Parameters

Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2004/7414.54
Minimum Educational Qualification and Experience	18 years of age 1. Class 10th passed or 2. Class 8th passed and 2 years of relevant experience
Pre-Requisite License or Training	1. Food standards for pickle 2. Method of food preservation 3. Food handling, packaging and storage techniques 4. Quality assessment of raw material, packaging materials and finished products 5. Waste management 6. Operation and maintenance of pickle processing machineries and equipment 7. GMP 8. HACCP 9. QMS 10. Computer basics and ERP system followed by the organization 11. Training in Food Safety Standards and Regulations (as per FSSAI) (Mandatory)
Minimum Job Entry Age	18 years
Last Reviewed On	31-05-2021
Next Review Date	31-05-2024
NSQC Approval Date	

QP Version	1.0
Model Curriculum Creation Date	04-09-2018
Model Curriculum Valid Up to Date	31-05-2024
Model Curriculum Version	1.0
Minimum Duration of the Course	320 Hours
Maximum Duration of the Course	320 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:

- Prepare and maintain work area and process machineries for pickle making
- Prepare variety of pickles as per standard practices
- Document and record necessary as required in the work process
- Apply safety, hygiene and sanitation practices at the workplace effectively

Compulsory Modules

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

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Introduction to the training program Bridge Module	06:00 Hours	10:00 Hours	00:00 Hours	00:00 Hours	16:00 Hours
Module 1: Introduction to the training program	02:00 Hours	00:00 Hours	00:00 Hours	00:00 Hours	02:00 Hours
Module 2: Professional and Core Skills	04:00 Hours	10:00 Hours	00:00 Hours	00:00 Hours	14:00 Hours
FIC/N0105 Prepare and maintain work area and process machineries for pickle making NOS Version No.: 1.0 NSQF Level: 3	10:00 Hours	30:00 Hours	00:00 Hours	00:00 Hours	40:00 Hours
Module 3: Prepare and maintain work area and process machineries for pickle making	10:00 Hours	30:00 Hours	00:00 Hours	00:00 Hours	40:00 Hours
FIC/N0106 Prepare for pickle making NOS Version No.: 1.0 NSQF Level: 3	10:00 Hours	20:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours
Module 4: Prepare for pickle making	10:00 Hours	20:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours

FIC/N0107 Pickle making NOS Version No.: 1.0 NSQF Level: 3	30:00 Hours	65:00 Hours	00:00 Hours	00:00 Hours	95:00 Hours
Module 5: Carry out pickle making as per production needs	20:00 Hours	50:00 Hours	00:00 Hours	00:00 Hours	70:00 Hours
Module 6: Organisational standards and norms	10:00 Hours	15:00 Hours	00:00 Hours	00:00 Hours	25:00 Hours
FIC/N0108 Complete documentation and record keeping related to pickle making NOS Version No.: 1.0 NSQF Level: 3	14:00 Hours	15:00 Hours	00:00 Hours	00:00 Hours	29:00 Hours
Module 7: Complete Documentation and Record Keeping Related to Pickle Making	08:00 Hours	05:00 Hours	00:00 Hours	00:00 Hours	13:00 Hours
Module 8: IT Orientation	06:00 Hours	10:00 Hours	00:00 Hours	00:00 Hours	16:00 Hours
FIC/N9001 Food safety, hygiene and sanitation for processing food products NOS Version No.: 1.0 NSQF Level: 3	20:00 Hours	50:00 Hours	00:00 Hours	00:00 Hours	70:00 Hours
Module 9: Food Safety, Hygiene and Sanitation for Processing Food Products	20:00 Hours	50:00 Hours	00:00 Hours	00:00 Hours	70:00 Hours
Employability and Entrepreneurship skills	28:00 Hours	12:00 Hours	00:00 Hours	00:00 Hours	40:00 Hours
Module 10: Employability and Entrepreneurship skills	28:00 Hours	12:00 Hours	00:00 Hours	00:00 Hours	40:00 Hours
Total Duration	118:00 Hours	202:00 Hours	00:00 Hours	00:00 Hours	320:00 Hours

Module Details

Module 1: Introduction to the training program

Bridge Module

Terminal Outcomes:

- Discuss the opportunities available for pickle making technicians in the food processing industry
- List the GMP and HACCP practices and FSSAI guidelines applicable in pickle making industry

Duration: 02:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the future trends and career growth opportunities available to pickle making technicians in the food processing industry. • Define food processing. • List the various sub sectors of food processing industry. • Define fruits and vegetables processing. • List the methods of processing fruits and vegetables. • List the various units within a pickle manufacturing plant. • State the methods of testing pickle for accepted quality standards. 	
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Professional and Core Skills

Bridge Module

Terminal Outcomes:

- Discuss the attributes of desirable professional behaviour
- Demonstrate the standard measures undertaken for working effectively

Duration: 04:00	Duration: 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Identify personal strengths and weaknesses. • Discuss the importance of workorder in the process. • State the importance of decision making in the job. • State the importance of communicating effectively. 	<ul style="list-style-type: none"> • Apply standard practice to undertake a self-assessment test for identifying strengths and weaknesses. • Plan and prioritise tasks effectively to ensure timely completion. • Demonstrate the ways to analyse situations for identifying problems and making sound decision promptly.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Gloves, hair net, shoe cover, soap dispenser, hand sanitizer, ear plugs, masks, aprons/lab coats eye protection, hard hats, gloves, rubber boots, etc.	

Module 3: Prepare and maintain work area and process machineries for pickle making

Mapped to FIC/N0105, v1.0

Terminal Outcomes:

- Discuss the tasks to be performed to prepare for production of pickles
- State the importance of maintaining tools and equipment effectively

Duration: 10:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the materials and equipment used in the cleaning and maintenance of the work area. • List the common detergents and sanitizers used in cleaning work area and machineries. • Explain the methods of cleaning and sanitization. • Describe the functions to be carried out before starting production. • Discuss the different types of maintenance procedures. 	<ul style="list-style-type: none"> • Perform various tasks for preparing the work area for scheduled production. • Conduct minor repairs and faults in process machineries. • Prepare the machines and tools required for production.
Classroom Aids	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Washer, peeler, vegetable cutter/slicer, blender, packaging machine, protective gloves, head caps, lab coat, safety goggles, safety boots, mouth masks, sanitizer, food safety manuals.	

Module 4: Prepare for pickle making

Mapped to FIC/N0106, v1.0

Terminal Outcomes:

- Discuss the tasks to be performed to prepare for pickle making
- Demonstrate the techniques to be followed to inspect and prepare the raw materials as per desirable standards

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the planning of the production order. • List the various raw materials that may be required. 	<ul style="list-style-type: none"> • Demonstrate how to plan the production process • Demonstrate how to calculate the process time for effective utilization of machineries • Explain how to plan batch size considering full capacity utilization of equipment • Demonstrate the calculation of raw material required for getting desired quantity of finished product • Calculate the packing material and the finished product. • Calculate the process time required for the production. • Check the conformance of raw material to the company standards.
Classroom Aids	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Washer, Peeler, Vegetable Cutter/Slicer, Blender, Packaging Machine, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual	

Module 5: Carry out pickle making as per production needs

Mapped to FIC/N0107,v1.0

Terminal Outcomes:

- Discuss the stages involved in the production of pickles
- Demonstrate the tasks to be performed for making pickles

Duration: 20:00	Duration: 50:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the stages involved in pickle production. 	<ul style="list-style-type: none"> • 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 receiving of the fruits and vegetables. • Demonstrate sorting and grading. • Demonstrate the peeling and slicing of fruits and vegetables. • Demonstrate the preparation of brine solution. • Demonstrate the curing of fruits and vegetables. • Demonstrate the packaging and analyse the quality of the finished 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. • Carry out the post production cleaning and regular maintenance work
Classroom Aids	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Cleaning Machine, Grinding Machines, Hydroclones, Sieving Machine, Conveyor, Drying Machine, Packaging Machine, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual	

Module 6: Organisational standards and norms

Mapped to NOS/N0107 v 1.0

Terminal Outcomes:

- Discuss the roles and responsibilities of a pickle making technician

Duration: 10:00	Duration: 15:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the roles and responsibilities of a pickle making technician • Explain the food safety hygiene standards to follow in a work environment 	<ul style="list-style-type: none"> • Demonstrate how to conduct yourself at the workplace • State the personal hygiene and sanitation guidelines • Demonstrate the process of maintaining documentation for raw materials • Execute the process of documenting production schedule and process parameters • Execute the process of documenting details of finished product
Classroom Aids	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual	

Module 7: Complete Documentation and Record Keeping Related to Pickle Making

Mapped to FIC/N0108, v1.0

Terminal Outcomes:

- Discuss the importance of recording information in production
- Demonstrate the standard practice followed to record production information

Duration: 08:00	Duration: 05:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the need for documenting and maintaining records of raw materials, processes and finished products. • Explain the method of documenting and recording the details of raw material to final finished product. 	<ul style="list-style-type: none"> • Demonstrate the process of documenting records of production plan, process parameters, and finished products.
Classroom Aids	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Food Safety Manual, Log Books.	

Module 8: IT orientation

Mapped to FIC/N5020 v1.0

Terminal Outcomes:

- List the parts of a computer
- Demonstrate the effective use of data recording applications at the workplace

Duration: 06:00	Duration: 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the various parts of a computer. • Describe the functions of different computer devices. • List the various applications used in recording information. 	<ul style="list-style-type: none"> • Demonstrate the standard techniques used to operate a computer. • Show how to use an ERP software for recording information. • Demonstrate the effective use of applications such as word processor and spreadsheets.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Computer/laptop.	

Module 9: Food Safety, Hygiene and Sanitation for Processing Food Products

Mapped to FIC/N9001, v1.0

Terminal Outcomes:

- Discuss the importance of health and safety at the workplace
- Demonstrate the tasks to be performed for ensuring health and safety at the workplace

Duration: 20:00	Duration: 50:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of safety, hygiene and sanitation at the workplace. • Discuss the relevant HACCP principles to be followed in the job. 	<ul style="list-style-type: none"> • Demonstrate the steps to be performed to maintain a safe and hygiene workplace. • Demonstrate the steps to be performed to implement HACCP practices for ensuring food safety. • Roleplay a situation depicting the safety practices to be followed at the workplace. • Identify the agents which are a potential food hazard and can cause adverse health effects • Demonstrate and apply food safety practices at workplace
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Protective gloves, head caps, aprons, safety goggles, safety boots, mouth covers, sanitizer, food safety manual ,logbooks etc.	

Module 10 : Employability and Entrepreneurship skills

Terminal Outcomes:

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

Duration: 28:00	Duration: 12:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss own strengths and weaknesses and analyse the gaps to ensure continuous improvement. • Discuss the measures to be undertaken to utilise time effectively thereby achieving maximum productivity. • List the characteristics of innovative individuals • List the levels of Maslow Hierarchy of needs • List the traits of effective team • Discuss tips for stress management • Discuss the importance of good work ethics • Discuss how to manage an enterprise • Describe how to plan effective strategies for solving problems and improving work culture within the team. • List the various types of digital marketing techniques. • Discuss the types and importance of e-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 	<ul style="list-style-type: none"> • Show how to analyse a situation to identify gaps for improving the work process. • Demonstrate the procedure to plan the time taken to perform various tasks effectively. • Describe how market research is carried out • Role play the characteristics of an effective entrepreneur and leader • Demonstrate on how to identify new business opportunities • Prepare a sample plan to solve problems and improve productivity at the workplace. • Demonstrate the procedure to operate a computer for digital marketing, e-commerce, branding, etc. • Show how to use services such as NEFT, IMPS, UPI, RTGS for online banking.

<p>Abhiyan</p> <ul style="list-style-type: none"> • 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	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma/B.Sc (home Sc) /B.Tech/BE in Food Technology or Food Engineering	Food Technology	2	Experience in Pickle Making Unit or Fruits/Vegetables Processing	2	Training of Pickle Making technicians	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Pickle Making Technician" mapped to QP: "FIC/Q0102, v1.0". Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q2601". Minimum accepted score is 80 % as per FICSI guidelines.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B.Sc (home Sc) /B.Tech/BE in Food Technology or Food Engineering	Pickle Making Unit or Fruits/Vegetables Processing	2	Experience in Pickle Making Unit or Fruits/Vegetables Processing	1	Assessment of individuals who have undergone training in pickle making	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Pickle Making Technician" mapped to QP: "FIC/Q0102, v1.0". Minimum accepted score is 80%	Recommended that the Assessor is certified for the Job Role: "Assessor", mapped to the Qualification Pack: "MEP/Q2701". Minimum accepted score as per MEPSC guidelines is 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. Therein 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 bank so 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.

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
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
HACCP	Hazard Analysis and Critical Control Points
GMP	Good Manufacturing Practices
GHP	Good Hygiene Practices