



Model Curriculum

QP Name: Cottage Cheese Maker

QP Code: FIC/Q2005

QP Version: 3.0

NSQF Level: 3

Model Curriculum Version: 3.0

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Table of Contents

Training Parameters	3
Program Overview.....	4
Compulsory Modules	5
Module 1: Introduction to Training Program and Overview of Food Processing Industry	7
Module 2: Prepare and maintain work area and process machineries for production of cottage cheese	9
Module 3: Organizational standards and norms	10
Module 4: Production of Cottage Cheese.....	11
Module 5: Complete Documentation and Record Keeping Related to Production of Cottage Cheese	12
Module 6: Food and Safety, Hygiene and Sanitation.....	14
Module 7 : Employability skills	15
Annexure	17
Trainer Requirements.....	17
Assessor Requirements	18
Assessment Strategy	19
Acronyms and Abbreviations.....	20

Training Parameters

Sector	Food Processing
Sub-Sector	Dairy Products
Occupation	Processing-Dairy Products
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7513.0400
Minimum Educational Qualification and Experience	<ol style="list-style-type: none"> Grade 8 pass and pursuing continuous schooling in regular school with vocational subject OR 8th grade pass with 1-year of relevant experience OR 5th grade pass with 4 years of relevant experience OR Ability to read and write with 5 years relevant experience OR Previous relevant qualification of NSQF Level 2 with 1 years of relevant experience OR Previous relevant qualification of NSQF Level 2.5 with 6 months of relevant experience
Pre-Requisite License or Training	Not Applicable
Minimum Job Entry Age	18 years
Last Reviewed On	30/09/2021
Next Review Date	29/09/2024
NSQC Approval Date	30/09/2021
QP Version	3.0
Model Curriculum Creation Date	30/05/2021

Model Curriculum Valid Up to Date	29/09/2024
Model Curriculum Version	3.0
Minimum Duration of the Course	330 Hours
Maximum Duration of the Course	330 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 participants will be able to:

- Prepare and maintain work area and process machineries
- Produce cottage cheese (Paneer) following specification and standards of the organization
- Carry out documentation and record keeping related to production
- Follow food safety and hygiene standards at workplace.

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
FIC/N2017 Prepare and maintain work area and process machineries for production of cottage cheese NOS Version No.: 1.0 NSQF Level: 4	20:00 Hours	40:00 Hours	00:00 Hours	00:00 Hours	60:00 Hours
Module 1: Introduction to Training Program and Overview of Food Processing Industry	04:00 Hours	00:00 Hours	00:00 Hours	00:00 Hours	04:00 Hours
Module 2: Prepare and maintain work area and process machineries for production of cottage cheese	16:00 Hours	40:00 Hours	00:00 Hours	00:00 Hours	56:00 Hours
FIC/N2018 Production of cottage cheese (paneer) NOS Version No.: 1.0 NSQF Level: 4	50:00 Hours	100:00 Hours	30:00 Hours	00:00 Hours	150:00 Hours
Module 3: Organizational Standards and Norms	05:00 Hours	10:00 Hours	00:00 Hours	00:00 Hours	15:00 Hours
Module 4: Production of cottage cheese	45:00 Hours	90:00 Hours	30:00 Hours	00:00 Hours	135:00 Hours

FIC/N2019 Complete documentation and record keeping related to production of cottage cheese NOS Version No.: 1.0 NSQF Level: 4	10:00 Hours	20:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours
Module 5: Complete documentation and record keeping related to production of cottage cheese	10:00 Hours	20:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours
FIC/N9001 Ensure Food Safety, Hygiene and Sanitation for Processing Food Products NOS Version No.: 1.0 NSQF Level: 4	10:00 Hours	20:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours
Module 6: Food Safety, Hygiene and Sanitation	10:00 Hours	20:00 Hours	00:00 Hours	00:00 Hours	30:00 Hours
DGT/VSQ/N0101 Employability Skills NOS Version No.: 1.0 NSQF Level: 2	12:00 Hours	18:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Module 7:Employability skills	12:00 Hours	18:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Total Duration	102:00 Hours	198:00 Hours	30:00 Hours	00:00 Hours	330:00 Hours

Module Details

Module 1: Introduction to Training Program and Overview of Food Processing Industry

Mapped to FIC/N2017 v1.0

Terminal Outcomes:

- Introduce to fellow participants and the trainer.

Duration: 04:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • State the need for and importance of training program • Define food processing. • List the various sub sectors of food processing industry. • Define dairy processing. • List the various units within a dairy processing unit. • State the methods of testing milk for accepted quality standards • State the need for processing of milk • State the composition and nutritive value of milk 	
Classroom Aids:	
White board/Chart papers, marker.	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Prepare and maintain work area and process machineries for production of cottage cheese

Mapped to FIC/N2017 v1.0

Terminal Outcomes:

- Prepare work area and process machineries required for production of dairy products.

Duration: 16:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the importance of cleanliness of the work area • Check if the work area is cleaned using approved sanitizers • Check if the equipment are washed with approved sanitizers • State the materials and equipment used in the cleaning and maintenance of the work area • State the common detergents and sanitizers used in cleaning work area and machineries • State the different types of maintenance procedures 	<ul style="list-style-type: none"> • Check if the work area is safe and hygienic for food production • Check if the disposal of waste material is as per SOP • Check the working and performance of all machineries and tools used for fruits and vegetables processing • Conduct minor repairs and faults in process machineries • Prepare the machines and tools required for production
Classroom Aids:	
Laptop, white/black board, marker, chart papers, projector, Trainer's guide, Student manual.	
Tools, Equipment and Other Requirements	
Homogenizer, Separator, Pasteurizer, Churner, Paneer Hooves, Paneer cutter Packaging Machines, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual	

Module 3: Organizational standards and norms

Mapped to FIC/N2018 v1.0

Terminal Outcomes:

- Discuss the attributes of Cottage Cheese Maker.
- Demonstrate the standard measures undertaken for working effectively
- Describe importance of personal hygiene and sanitation

Duration: 05:00	Duration: 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe how to conduct yourself at the workplace. • State the roles and responsibilities of Cottage Cheese Maker • Describe the personal hygiene and sanitation guidelines to be followed at the workplace. • State the food safety hygiene standards followed • Describe the organisation standards, process standards and procedures followed. • Describe the provision of wages and accident compensation as per organisation policy. • State the code of business conduct. • Describe the dress code to be followed. • State the types of raw materials, packaging materials used and finished products processed in the organization 	<ul style="list-style-type: none"> • Demonstrate how to conduct yourself at the workplace. • Demonstrate the procedure to be followed to implement personal hygiene and sanitation guidelines at the workplace.
Classroom Aids:	
Laptop, white board, marker, chart papers, projector, trainer's guide and student handbook,	
Tools, Equipment and Other Requirements	
protective gloves, head caps, aprons, safety goggles, safety boots, mouth masks, sanitizer, safety manual	

Module 4: Production of Cottage Cheese

Mapped to FIC/N2018 v1.0

Terminal Outcomes:

- Describe the procedure for production of various foods.

Duration: 45:00	Duration: 90:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Plan production sequence List the different machineries involved in manufacturing of cottage cheese State the working of machineries involved in the production 	<ul style="list-style-type: none"> Demonstrate the allotting of responsibilities Demonstrate assembling of all components of machines Demonstrate the entire production of cheese Perform calculation for raw material requirement Perform a check on the availability of raw material, ingredients and packaging materials Perform the grouping of ingredients for same type of products Analyse the quality of finished product
Classroom Aids:	
Laptop, white board, marker, chart papers, projector, trainer's guide and student handbook.	
Tools, Equipment and Other Requirements	
Homogenizer, Separator, Pasteurizer, Churner, Paneer Hooves, Paneer cutter Packaging Machines, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual	

Module 5: Complete Documentation and Record Keeping Related to Production of Cottage Cheese

Mapped to FIC/N2019 v1.0

Terminal Outcomes:

- Explain the methods of documenting and recording the complete details
- Demonstrate the process of documenting records effectively

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • State the need for documenting and maintaining records of raw materials, processes and finished products. • State 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:	
Laptop, white/black board, marker, chart papers, projector, Trainer's guide, Student manual.	
Tools, Equipment and Other Requirements	
Food Safety Manual, Log Books.	

Module 6: Food Safety, Hygiene and Sanitation

Mapped to FIC/N9001 v1.0

Terminal Outcomes:

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

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • State the importance of safety, hygiene and sanitation in the food industry. • Discuss about the industry standards to maintain a safe and hygiene workplace. 	<ul style="list-style-type: none"> • Demonstrate the safety practices to be followed in the work area. • Demonstrate the personal hygiene to be followed in the work area. • Apply HACCP principles to eliminate food safety hazards in the process and products.
Classroom Aids:	
NIL	
Tools, Equipment and Other Requirements	
Protective gloves, head caps, aprons, safety goggles, safety boots, mouth covers, sanitizer, safety manual, logbooks etc.	

Module 7 : Employability Skills

Mapped to DGT/VSQ/N0101, v 1.0

Terminal Outcomes:

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

Duration: 12:00	Duration: 18:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of Employability Skills in meeting the job requirements. • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. • Discuss 21st century skills. • Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations. • Discuss the significance of reporting sexual harassment issues in time • Discuss the significance of using financial products and services safely and securely. • Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws • Explain the importance of managing expenses, income, and savings. • Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely • Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges 	<ul style="list-style-type: none"> • Show how to practice different environmentally sustainable practices • Use appropriate basic English sentences/phrases while speaking • Demonstrate how to communicate in a well -mannered way with others • Demonstrate working with others in a team • Show how to conduct oneself appropriately with all genders and PwD • Show how to operate digital devices and use the associated applications and features, safely and securely • Create a biodata • Use various sources to search and apply for jobs

- Differentiate between types of customers
- Explain the significance of identifying customer needs and addressing them
- Discuss the significance of maintaining hygiene and dressing appropriately
- Discuss the significance of dressing up neatly and maintaining hygiene for an interview
- Discuss how to search and register for apprenticeship opportunities

Classroom Aids:

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

Tools, Equipment and Other Requirements

Computer/laptop.

Annexure

Trainer Requirements

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

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Cottage Cheese Maker" mapped to QP: "FIC/Q2005, v3.0". Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q0102". 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	
M.Sc/M.Tech/M E	Food technology or food engineering	2	Food processing	1	Food processing	
B.Sc or graduate/B.Tech /BE	Food technology/ Home Science	3	Food processing	2	Food processing	
Diploma	Hotel management/ Food Science/ Home Science	4	Food processing	2	Food processing	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Cottage Cheese Maker" mapped to QP: "FIC/Q2005, v3.0". Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "SSC/Q1402". Minimum accepted SCORE IS 80 % as per FICSI guidelines.

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