









Artisanal Chocolate Maker-Entrepreneur

QP Code: FIC/Q7101

Version: 1.0

NSQF Level: 4

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FIC/Q7101: Artisanal Chocolate Maker-Entrepreneur

Brief Job Description

The Artisanal Chocolate Maker prepares a variety of artisanal chocolates in appropriate batches. This involves devising a recipe, selection of ingredients, processing them to produce the final product and packaging as per production needs. During the entire process, the individual ensures strict adherence to standardised food safety guidelines and work practices.

Personal Attributes

An Artisanal Chocolate Maker must be a quick learner, critical decision maker and creative. The individual must be able to communicate effectively, plan, organize and prioritize tasks as per work requirements.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. FIC/N9905: Establish facilities for artisanal food production
- 2. FIC/N7101: Prepare for chocolate production
- 3. FIC/N7102: Carry out chocolate production
- 4. FIC/N9904: Ensure food safety at the workplace
- 5. FIC/N9903: Ensure workplace health and safety
- 6. FIC/N9902: Work effectively in an organisation
- 7. SGJ/N1702: Optimize resource utilization at workplace

Qualification Pack (QP) Parameters

Sector	Food Processing
Sub-Sector	Confectionery
Occupation	Processing-Confectionery
Country	India
NSQF Level	4









Credits	NA
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7512.0800
Minimum Educational Qualification & Experience	10th Class (and 2 years course in any stream) with 1 Year of experience OR 10th Class with 2 Years of experience Relevant experience OR 10th Class + I.T.I (2 years) with 1 Year of experience OR Graduate (Any stream) OR 12th Class (any stream) with 1 Year of experience food processing
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	25/11/2021
Next Review Date	25/11/2024
NSQC Approval Date	25/11/2021
Version	1.0
Reference code on NQR	2021/FI/FICSI/04647
NQR Version	1









FIC/N9905: Establish facilities for artisanal food production

Description

This NOS is about establishing new or a reworked facility to produce artisanal food products as per regulatory and product-specific processing requirements.

Scope

The scope covers the following:

- Comply with legislative guidelines for a production facility
- Develop recipes for artisanal production
- Obtain materials for setting up production facility
- Perform entrepreneurial activities

Elements and Performance Criteria

Comply with legislative guidelines for a production facility

To be competent, the user/individual on the job must be able to:

- PC1. analyze and investigate purpose and intent of legislation related to various factor
 - Factors: food premises, storage facilities, equipment, food production, packaging, labelling of products, etc.
- **PC2.** identify the authorities responsible for administering legislation for setting up a food processing facility
- **PC3.** assess workplace and food safety systems to determine compliance as per production needs
- **PC4.** establish standard procedures to ensure compliance with legal requirements
- **PC5.** identify and report non-compliance with the legislative guidelines to the concerned authority as per SOP
- **PC6.** ensure accuracy of the recorded information in various forms, checklists, etc. obtained from designated personnel
- **PC7.** keep the relevant documentation updated at all times for future reference

Develop recipes for artisanal production

To be competent, the user/individual on the job must be able to:

- **PC8.** formulate recipes and methodologies in accordance with customer needs and product type
- **PC9.** conceptualize new ideas and experiment with various combinations of old and new ingredients to develop new products
- **PC10.** experiment with new and existing methods of production to develop new production methods for a variety of products
- **PC11.** evaluate the quality of production methods by assessing necessary parameters to validate and standardize the best product formulation method
- **PC12.** estimate the costs to be incurred for producing the required product as per equipment capacity, material usage, processing, transport, distribution, etc.
- **PC13.** calculate the cost of the final product and standardize the unit price of the product considering all the necessary parameters









Obtain materials for setting up production facility

To be competent, the user/individual on the job must be able to:

- **PC14.** identify the equipment and materials to be procured before setting up a production facility Materials: raw materials, packaging materials, additives, preservatives Equipment: mixing equipment, premixing equipment, processing equipment, packaging equipment, cleaning equipment, etc.
- **PC15.** identify and select vendors for sourcing raw materials, packaging materials, and equipment for production
- **PC16.** check and verify the quality of materials received from the vendors as per standards
- **PC17.** maintain records of materials obtained and other documents such as equipment manuals, manufacturers' instructions, etc. for future reference

Perform entrepreneurial activities

To be competent, the user/individual on the job must be able to:

- **PC18.** identify own strength and weakness and analyse the gaps for improvement
- **PC19.** manage time effectively to minimize work load, anger and stress at workplace
- **PC20.** plan different strategies that solve problems, enhance communications and improve work culture
- **PC21.** operate computer and its applications to carry out digital initiative such as digital marketing, e-commerce, branding etc.
- **PC22.** operate online banking services for seamless transfer of money through NEFT, IMPS, UPI, RTGS
- **PC23.** develop a detailed project report to attract good investment opportunities
- **PC24.** identify and analyse new business opportunities through various entrepreneurial programs

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** legislation, regulations, and standards to be followed for artisanal production pertaining to facility and production requirements
- **KU2.** organizational policy for reporting and documentation
- **KU3.** government policies on entrepreneurship
- **KU4.** procedure to set-up a production facility
- **KU5.** how to make a business plan
- **KU6.** applicable FSSAI guidelines to be followed for the establishment of a production facility
- **KU7.** importance of obtaining legislative approvals, site inspections, reporting variances, etc. in the job
- **KU8.** material and equipment requirements for setting up a production facility
- **KU9.** procedure to inspect procured material and equipment for quality
- **KU10.** various ingredients used in different recipes
- **KU11.** ways to upgrade the existing recipes and developing new ones
- **KU12.** applicability and capacity of various equipment used for artisanal production
- KU13. various calculations performed, cost estimations, and their optimization techniques









- **KU14.** vendor management process
- KU15. how to handle e commerce
- **KU16.** how to analyse performance of self and identify gaps for improvement
- **KU17.** importance of time management
- **KU18.** how to carry out market research
- **KU19.** importance of innovation in business
- **KU20.** how to prepare a plan for carrying out various activities as per task requirements
- **KU21.** steps followed to operate a computer and its applications
- KU22. features of online banking and how to transact using various online systems safely
- **KU23.** information to be contained in a business report
- **KU24.** importance of entrepreneurial programs, how to expand businesses and generate employment opportunities

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** read and interpret information such as standards, policies, forms, etc.
- **GS2.** communicate with others effectively
- **GS3.** plan and prioritize tasks as per work requirements
- **GS4.** analyze and report variances promptly









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Comply with legislative guidelines for a production facility	10	25	-	-
 PC1. analyze and investigate purpose and intent of legislation related to various factor Factors: food premises, storage facilities, equipment, food production, packaging, labelling of products, etc. 	-	-	-	-
PC2. identify the authorities responsible for administering legislation for setting up a food processing facility	-	-	-	-
PC3. assess workplace and food safety systems to determine compliance as per production needs	-	-	-	-
PC4. establish standard procedures to ensure compliance with legal requirements	-	-	-	-
PC5. identify and report non-compliance with the legislative guidelines to the concerned authority as per SOP	-	-	-	-
PC6. ensure accuracy of the recorded information in various forms, checklists, etc. obtained from designated personnel	-	-	-	-
PC7. keep the relevant documentation updated at all times for future reference	-	-	-	-
Develop recipes for artisanal production	14	24	-	-
PC8. formulate recipes and methodologies in accordance with customer needs and product type	-	-	-	-
PC9. conceptualize new ideas and experiment with various combinations of old and new ingredients to develop new products	-	-	-	-
PC10. experiment with new and existing methods of production to develop new production methods for a variety of products	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. evaluate the quality of production methods by assessing necessary parameters to validate and standardize the best product formulation method	-	-	-	-
PC12. estimate the costs to be incurred for producing the required product as per equipment capacity, material usage, processing, transport, distribution, etc.	-	-	-	-
PC13. calculate the cost of the final product and standardize the unit price of the product considering all the necessary parameters	-	-	-	-
Obtain materials for setting up production facility	5	8	-	-
PC14. identify the equipment and materials to be procured before setting up a production facility Materials: raw materials, packaging materials, additives, preservatives Equipment: mixing equipment, premixing equipment, processing equipment, packaging equipment, cleaning equipment, etc.	-	-	-	-
PC15. identify and select vendors for sourcing raw materials, packaging materials, and equipment for production	-	-	-	-
PC16. check and verify the quality of materials received from the vendors as per standards	-	-	-	-
PC17. maintain records of materials obtained and other documents such as equipment manuals, manufacturers' instructions, etc. for future reference	-	-	-	-
Perform entrepreneurial activities	7	7	-	-
PC18. identify own strength and weakness and analyse the gaps for improvement	-	-	-	-
PC19. manage time effectively to minimize work load, anger and stress at workplace	-	-	-	-
PC20. plan different strategies that solve problems, enhance communications and improve work culture	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. operate computer and its applications to carry out digital initiative such as digital marketing, e-commerce, branding etc.	-	-	-	-
PC22. operate online banking services for seamless transfer of money through NEFT, IMPS, UPI, RTGS	-	-	-	-
PC23. develop a detailed project report to attract good investment opportunities	-	-	-	-
PC24. identify and analyse new business opportunities through various entrepreneurial programs	-	-	-	-
NOS Total	36	64	-	-









National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9905
NOS Name	Establish facilities for artisanal food production
Sector	Food Processing
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022









FIC/N7101: Prepare for chocolate production

Description

This NOS unit is about planning production of chocolate, and ensuring availability of material, tools, equipment, manpower, safety, and hygiene at the workplace for production of the chocolate.

Scope

The scope covers the following:

- Plan for chocolate production
- Maintain work area for production
- Maintain process machinery and tools
- Select and test materials for production

Elements and Performance Criteria

Plan for chocolate production

To be competent, the user/individual on the job must be able to:

- **PC1.** obtain work requirements from various sources such as individuals, organisations, etc.
- **PC2.** document a standardised production plan for chocolate making. Production plan: quality and quantity of raw materials to be used, type of chocolate to be produced, estimated timelines, budgetary requirements, other materials required; tools, equipment and machinery utilised, etc.
- **PC3.** plan the production process by referring to process flow chart, formulation charts, etc.
- **PC4.** check the availability of raw materials, packaging materials, equipment and manpower
- **PC5.** plan the batch size based on the production order and machine capacity
- **PC6.** calculate the raw materials, packaging materials, machine utilisation and manpower required for production
- **PC7.** allot responsibilities/ work to the production team and address their queries

Maintain work area for production

To be competent, the user/individual on the job must be able to:

- **PC8.** inspect the work area for the presence of waste and hazardous materials
- **PC9.** clean the work area using industry approved sanitizers
- **PC10.** dispose waste materials from the work area safely as per standard operating procedure (SOP)

Maintain process machinery and tools

To be competent, the user/individual on the job must be able to:

- PC11. inspect the production tools, equipment and machinery for desired functioning
- **PC12.** clean the production tools, equipment and machinery thoroughly using approved cleaning agents
- **PC13.** assemble the materials to be used as per standard work practices

Select and test materials for production









To be competent, the user/individual on the job must be able to:

- **PC14.** receive the materials (such as raw materials and packaging materials) required for production from designated sources
- **PC15.** test the samples of materials received for desired characteristics such as organoleptic evaluation, chemical and biological testing, etc.
- **PC16.** report substandard quality ingredients to the relevant personnel
- PC17. organize the ingredients as per production plan
- **PC18.** record information as per standard work practices. Information: raw material used, quality testing reports, etc.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** organization's policies on quality and delivery standards, food safety, hygiene standards, hazards, integrity, dress code, etc.
- **KU2.** effect of not following defined procedures/work instructions
- **KU3.** organisational requirement of documentation of work
- **KU4.** standards, regulations, and code of conduct relevant to the food industry
- **KU5.** job responsibility / duties
- **KU6.** internal processes such as procurement, store management, inventory management, quality management and key contact points for query resolution
- **KU7.** cleaning process to disinfect equipment/ tools and types of chemicals, materials and equipment required for cleaning the work area and potential allergens associated with manufacturing process
- **KU8.** supplier/ manufacturer instructions related to cleaning of machineries
- **KU9.** food Safety Standards and Regulation (as per FSSAI)
- **KU10.** legal regulations pertaining to workplace such as health and safety, recommended
- **KU11.** dosage for use of sanitizers, control of substances hazardous to health, handling/ storage/ disposal/cautions for use of sanitizers and disinfectants, fire precautions/ occurrences, hygiene practice, disposal of waste, environmental protection etc.
- **KU12.** potential food safety risks and control procedures associated with selecting and preparing raw materials
- **KU13.** method of recording, reporting and communication is and the importance of doing these
- **KU14.** biological, chemical and physical properties of the samples and the significance of these properties in the proper conduct of sampling of material
- **KU15.** types of equipment and tools used
- **KU16.** how to access and use materials, tools, and equipment

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. note the raw materials used for production and finished products produced









- **GS2.** note the readings of the process parameters and provide necessary information to fill the process chart, ERP, etc.
- **GS3.** write information documents to internal departments/ internal teams
- **GS4.** read equipment manuals and process documents to understand the equipment operation and process requirement
- **GS5.** effectively communicate with supervisor, team members and cross department team
- **GS6.** attentively listen and comprehend the information given by the speaker
- **GS7.** analyze critical points in day-to-day tasks and identify control measures to solve the issue
- **GS8.** plan and organize the work order, job received, schedules and activities with the supervisor
- **GS9.** understand customer requirement and their priority and respond as per their needs
- **GS10.** apply domain information about maintenance processes and technical









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Plan for chocolate production	7	33	-	-
PC1. obtain work requirements from various sources such as individuals, organisations, etc.	1	4	-	-
PC2. document a standardised production plan for chocolate making. Production plan: quality and quantity of raw materials to be used, type of chocolate to be produced, estimated timelines, budgetary requirements, other materials required; tools, equipment and machinery utilised, etc.	1	5	-	-
PC3. plan the production process by referring to process flow chart, formulation charts, etc.	1	5	-	-
PC4. check the availability of raw materials, packaging materials, equipment and manpower	1	5	-	-
PC5. plan the batch size based on the production order and machine capacity	1	5	-	-
PC6. calculate the raw materials, packaging materials, machine utilisation and manpower required for production	1	5	-	-
PC7. allot responsibilities/ work to the production team and address their queries	1	4	-	-
Maintain work area for production	3	14	-	-
PC8. inspect the work area for the presence of waste and hazardous materials	1	4	-	-
PC9. clean the work area using industry approved sanitizers	1	5	-	-
PC10. dispose waste materials from the work area safely as per standard operating procedure (SOP)	1	5	-	-
Maintain process machinery and tools	3	14	-	-
PC11. inspect the production tools, equipment and machinery for desired functioning	1	4	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. clean the production tools, equipment and machinery thoroughly using approved cleaning agents	1	5	-	-
PC13. assemble the materials to be used as per standard work practices	1	5	-	-
Select and test materials for production	5	21	-	-
PC14. receive the materials (such as raw materials and packaging materials) required for production from designated sources	1	4	-	-
PC15. test the samples of materials received for desired characteristics such as organoleptic evaluation, chemical and biological testing, etc.	1	5	-	-
PC16. report substandard quality ingredients to the relevant personnel	1	4	-	-
PC17. organize the ingredients as per production plan	1	4	-	-
PC18. record information as per standard work practices. Information: raw material used, quality testing reports, etc.	1	4	-	-
NOS Total	18	82	-	-









National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7101
NOS Name	Prepare for chocolate production
Sector	Food Processing
Sub-Sector	Confectionery
Occupation	Processing-Confectionery
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	25/11/2021
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021









FIC/N7102: Carry out chocolate production

Description

This unit defines the process to be followed to produce chocolates using relevant practices.

Scope

The scope covers the following:

- Process ingredients for chocolate recipes
- Perform sieving, mixing, and refining
- Perform tempering and enrobing of refined chocolate mixture
- Perform moulding or extrusion of chocolate
- Wrap and label the chocolate
- Manage finished goods

Elements and Performance Criteria

Process ingredients for chocolate recipes

To be competent, the user/individual on the job must be able to:

- **PC1.** select the ingredients to be used for producing desired type of chocolates
- **PC2.** carry out any pre-processing tasks such as blending, heating, pre-mixing, etc. as per production requirements
- **PC3.** store the processed ingredients appropriately while ensuring accurate labelling

Perform sieving, mixing, and refining

To be competent, the user/individual on the job must be able to:

- **PC4.** examine sieve intactness as per defined frequencies
- **PC5.** sieve the cocoa powder and refined sugar to ensure no physical contaminants are present and transfer the ingredients to the mixing machine
- **PC6.** set and monitor the machine physical parameters to mix the ingredients such as cocoa mass, cocoa butter, sugar, additives, etc. as per Standard Operating Procedure. Physical parameters: temperature, weight, revolutions per minute (RPM), etc.
- **PC7.** mix the ingredients using manual stirring/automatic mixer adequately in accordance with SOP
- **PC8.** transfer the mix from mixing tank to refiner to reduce particle size of refined chocolate and then transfer to conch where liquid chocolate prepared
- **PC9.** check the consistency and flowability of the mixture after transferring it into the storage tanks
- PC10. record observations and deviations in a specified format as required

Perform tempering and enrobing of refined chocolate mixture

To be competent, the user/individual on the job must be able to:

- **PC11.** carry out tempering by heating the chocolate mixture to a specific temperature
- PC12. inspect the mixture to ensure that the cocoa butter is completely infused









- **PC13.** apply standard practice for enrobing the chocolate with desirable coatings if needed as per production demands
- **PC14.** remove and dispose excess materials as per SOP

Perform moulding or extrusion of chocolate

To be competent, the user/individual on the job must be able to:

- **PC15.** transfer the liquid chocolate material in feeding hopper as per required quantity
- **PC16.** monitor process parameters (such as, temperature, pressure, rpm, flow rate, particle size) and product parameters (such as weight, shape and size of product, etc.) to ensure they are as per production requirements
- **PC17.** cool down the chocolate to the specified temperature and confirm whether it is ready for packaging
- **PC18.** handover the sample of the produced chocolate to quality lab for analysis
- **PC19.** document and maintain records of production details (such as, product produced, production sequence, details of equipment), process details (such as raw materials details, process parameters for entire process in process charts), batch size, raw material used, yield after each stage of process, wastage, energy utilization and minute the observations or deviations related to production

Wrap and label the chocolate

To be competent, the user/individual on the job must be able to:

- **PC20.** load the desired packaging material on the machine appropriately
- **PC21.** load the chocolates on the packaging conveyor ensuring product safety
- **PC22.** start the packaging machine safely and control the infeed, progress of products, output of wrapped and labelled products as per the specifications
- **PC23.** monitor the process to ascertain suitable packaging for chocolate production
- **PC24.** decorate packed chocolates as per occasion, festivities, customer demands, etc.
- **PC25.** record information (manual, ERP, etc.) of finished products details such as name of the product, batch number, time of packing, date of manufacture, date of expiry, other label details, primary and secondary packaging materials for all finished products, storage conditions etc. as per standard work practices

Manage finished goods

To be competent, the user/individual on the job must be able to:

- **PC26.** inspect the quality of finished products thoroughly before dispatch and store it at designated place
- **PC27.** coordinate with vendors for distribution and supply of chocolates to individuals and organisations
- **PC28.** record information for quality and quantity of goods supplied, vendor details, customer details, material receipts, time of shipment, etc.
- **PC29.** monitor stocked material (raw material, processed material and finished goods) for desired quality and quantity as per the purchase order
- **PC30.** ensure a clean and tidy workplace and take relevant measures against pest infestations and presence of dust, water, etc.

Knowledge and Understanding (KU)









The individual on the job needs to know and understand:

- **KU1.** legal or regulatory requirements to be followed in chocolate making as per FSSAI guidelines health, safety, and hygiene standards to be followed during the entire work process
- **KU2.** considerations for the selection and processing of ingredients for producing various types of chocolates (such as plain chocolate, milk chocolate, white chocolate, sugar free chocolate) and their characteristics
- **KU3.** different methods for processing ingredients for artisanal chocolate making
- **KU4.** machines involved in the chocolate production process and their specific functions
- **KU5.** potential allergens associated with production of chocolate products
- **KU6.** importance of labelling and information to be mentioned on the product labels
- **KU7.** how to sieve the preliminary mixture properly and monitor machine parameters to ensure adequate mixing for chocolate production
- **KU8.** how to select the coatings to be applied as per customer demands, production needs, etc.
- **KU9.** methods for mixing ingredients adequately for chocolate making and equipment used
- **KU10.** purpose of sieving, refining a chocolate and the process involved in sieving, refining, including double refining
- **KU11.** effect of sieving, refining on particle size distribution, the texture, and the taste of chocolate
- **KU12.** importance of tempering chocolate and techniques used
- **KU13.** stages involved in the enrobing process, the sequence in which they are performed and why this is important
- **KU14.** importance of maintaining required temperature for chocolate production
- **KU15.** importance of disposing waste at every step of the production process
- **KU16.** steps involved in chocolate moulding as per type of chocolate to be produced
- **KU17.** standard techniques used in wrapping and labelling chocolates post-production and information to be displayed on the labels
- **KU18.** ambient conditions for storing chocolate and what could happen if the required temperature is not maintained
- **KU19.** how to coordinate with vendors for chocolate supply
- **KU20.** information to be recorded in the production process
- **KU21.** stock monitoring to ensure desired quantity and quality
- **KU22.** safe disposal of waste and other contaminants from the workplace

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** read and interpret the information communicated by supervisor and various stakeholders in the team
- **GS2.** observe the process carefully and take suitable actions if required
- **GS3.** read and interpret process manuals and documents for machine utilisation, characteristics of ingredients, etc.
- **GS4.** ascertain possible opportunities for creativity and innovation









- GS5. manage problems and decisions using strong critical thinking
 GS6. be meticulous, exemplify patience and have good eye for detail
 GS7. demonstrate people skills in order to work with internal team, clients, and vendors
 GS8. discuss task lists, ashedular, and activities with team effectively.
- **GS8.** discuss task lists, schedules, and activities with team effectively **GS9.** attentively listen and comprehend the information provided
- **GS10.** plan daily tasks and prioritise as per production needs effectively
- **GS11.** use reasoning skills to identify and resolve the day-to-day issues









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Process ingredients for chocolate recipes	3	9	-	-
PC1. select the ingredients to be used for producing desired type of chocolates	1	3	-	-
PC2. carry out any pre-processing tasks such as blending, heating, pre-mixing, etc. as per production requirements	1	3	-	-
PC3. store the processed ingredients appropriately while ensuring accurate labelling	1	3	-	-
Perform sieving, mixing, and refining	7	21	-	-
PC4. examine sieve intactness as per defined frequencies	1	3	-	-
PC5. sieve the cocoa powder and refined sugar to ensure no physical contaminants are present and transfer the ingredients to the mixing machine	1	3	-	-
PC6. set and monitor the machine physical parameters to mix the ingredients such as cocoa mass, cocoa butter, sugar, additives, etc. as per Standard Operating Procedure. Physical parameters: temperature, weight, revolutions per minute (RPM), etc.	1	3	-	-
PC7. mix the ingredients using manual stirring/automatic mixer adequately in accordance with SOP	1	3	-	-
PC8. transfer the mix from mixing tank to refiner to reduce particle size of refined chocolate and then transfer to conch where liquid chocolate prepared	1	3	-	-
PC9. check the consistency and flowability of the mixture after transferring it into the storage tanks	1	3	-	-
PC10. record observations and deviations in a specified format as required	1	3	-	-
Perform tempering and enrobing of refined chocolate mixture	3	8	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. carry out tempering by heating the chocolate mixture to a specific temperature	1	2	-	-
PC12. inspect the mixture to ensure that the cocoa butter is completely infused	1	2	-	-
PC13. apply standard practice for enrobing the chocolate with desirable coatings if needed as per production demands	0.5	2	-	-
PC14. remove and dispose excess materials as per SOP	0.5	2	-	-
Perform moulding or extrusion of chocolate	5	12	-	-
PC15. transfer the liquid chocolate material in feeding hopper as per required quantity	1	3	-	-
PC16. monitor process parameters (such as, temperature, pressure, rpm, flow rate, particle size) and product parameters (such as weight, shape and size of product, etc.) to ensure they are as per production requirements	1	3	-	-
PC17. cool down the chocolate to the specified temperature and confirm whether it is ready for packaging	1	2	-	-
PC18. handover the sample of the produced chocolate to quality lab for analysis	1	2	-	-
PC19. document and maintain records of production details (such as, product produced, production sequence, details of equipment), process details (such as raw materials details, process parameters for entire process in process charts), batch size, raw material used, yield after each stage of process, wastage, energy utilization and minute the observations or deviations related to production	1	2	-	-
Wrap and label the chocolate	5	12	-	-
PC20. load the desired packaging material on the machine appropriately	1	3	-	-
PC21. load the chocolates on the packaging conveyor ensuring product safety	1	3	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC22. start the packaging machine safely and control the infeed, progress of products, output of wrapped and labelled products as per the specifications	1	2	-	-
PC23. monitor the process to ascertain suitable packaging for chocolate production	1	2	-	-
PC24. decorate packed chocolates as per occasion, festivities, customer demands, etc.	1	2	-	-
PC25. record information (manual, ERP, etc.) of finished products details such as name of the product, batch number, time of packing, date of manufacture, date of expiry, other label details, primary and secondary packaging materials for all finished products, storage conditions etc. as per standard work practices	-	-	-	-
Manage finished goods	6	9	-	-
PC26. inspect the quality of finished products thoroughly before dispatch and store it at designated place	-	-	-	-
PC27. coordinate with vendors for distribution and supply of chocolates to individuals and organisations	-	-	-	-
PC28. record information for quality and quantity of goods supplied, vendor details, customer details, material receipts, time of shipment, etc.	-	-	-	-
PC29. monitor stocked material (raw material, processed material and finished goods) for desired quality and quantity as per the purchase order	-	-	-	-
PC30. ensure a clean and tidy workplace and take relevant measures against pest infestations and presence of dust, water, etc.	-	-	-	-
NOS Total	29	71	-	-









National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7102
NOS Name	Carry out chocolate production
Sector	Food Processing
Sub-Sector	Confectionery
Occupation	Processing-Confectionery
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	25/11/2021
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021









FIC/N9904: Ensure food safety at the workplace

Description

This unit is about performing various tasks for ensuring food safety at the workplace.

Scope

The scope covers the following:

Ensure food safety at the workplace

Elements and Performance Criteria

Ensure food safety at the workplace

To be competent, the user/individual on the job must be able to:

- **PC1.** identify the biological, chemical, and physical hazards at various stages of food processing. Stages: procurement of raw material; production, manufacturing, distribution, delivery of finished product, etc.
- **PC2.** implement food safety procedures and regulatory policies at the food processing workplace. Policies: Visitor's Policy, Health declaration policy, Jewellery policy, Quality, and safety policy
- **PC3.** ensure that the materials are adequately isolated to prevent them from contamination. Materials: raw materials, processed materials, finished goods, etc. Contamination: Physical, Chemical, Biological & shop floor environment
- **PC4.** establish and follow Good Manufacturing Practices (GMPs) laid down in applicable Food Safety and Standards Authority of India (FSSAI) guidelines. Good Manufacturing Practices (GMPs): location and layout(ergonomics), cleaning and sanitation, equipment and containers, pest control, facilities (lighting, water supply, drainage and waste disposal, air quality and ventilation), food storage, transportation, and distribution etc.
- **PC5.** establish and follow allergen management system for handling and storage of raw materials
- **PC6.** establish and follow monitoring systems like Hazard Analysis Critical Control Point (HACCP), product information and consumer awareness, product recall and withdrawal, and traceability HACCP: Hazard identification, identification of critical control points, establish critical limits, corrective and preventive action. Product information and consumer awareness: Product labelling and consumer education. Traceability: forward and backward traceability
- **PC7.** take appropriate action in instances such as VACCP (Vulnerability Assessment Critical Control Points) and TACCP (Threat Assessment Critical Control Points)
- **PC8.** plan, conduct, manage, consolidate outcomes, and close corrective actions of workplace audit on food safety as per FSSAI guidelines, address the non-conformance with root cause analysis (RCA), corrective action preventive action(CAPA)
- **PC9.** address issues pertaining to food safety and quality reported by the team members
- **PC10.** record information such as food safety regulations followed, inspections done, faults observed, etc. as per standard procedure
- **PC11.** organize trainings and workshops on food safety aspects such as Good Manufacturing Practices (GMP), HACCP, VACCP, TACCP, etc.









Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** various processes that take place in a food industry
- **KU2.** biological, chemical, and physical hazards in a food industry
- **KU3.** types of food contaminations, their causes, and ways to prevent it
- **KU4.** organisational policy and procedures for ensuring food safety(such as Visitor's Policy, Health declaration policy, Jewelry policy, Quality, and safety policy)
- **KU5.** applicable regulations for ensuring food safety as listed in 'The Food Safety and Standards Act, 2006'
- **KU6.** role of HACCP in food industry, its constituents and procedure to implement it in an organisation
- **KU7.** VACCP and TACCP and how to implement it effectively
- **KU8.** how to conduct workplace food safety audits
- **KU9.** types of allergen and allergen management at workplace
- **KU10.** key observations and corrective actions to be applied for ensuring food safety
- **KU11.** various issues that can arise during production and other processes as faced by team
- **KU12.** information to be recorded in the work process
- **KU13.** how to do root cause analysis and perform corrective action and preventive actions
- **KU14.** how to conduct training of workforce on various food safety procedures such as GMP, HACCP, information to be shared, ways to report accidents, escalation of issues beyond own scope, etc.

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write an accident/incident report in local language or English
- **GS2.** read and comprehend basic content to read labels, charts, signages and symbols
- **GS3.** read and comprehend basic English to read product manuals for safe operation
- **GS4.** guestion coworkers appropriately in order to clarify instructions and other issues
- **GS5.** make appropriate decisions pertaining to the concerned area of work regarding the work objective, span of authority, responsibility, laid down procedure and guidelines
- **GS6.** plan and organize the work schedule, work area, tools, equipment, and materials for improved productivity
- **GS7.** identify probable solutions to the problems in hand
- **GS8.** evaluate proposed solution with respect to key priorities and considerations
- **GS9.** seek official and authorised sources of help and guidance to resolve problems that cannot be solved at one's level of authority
- **GS10.** identify cause and effect relations in their area of work to anticipate potential problems and their solution
- **GS11.** analyse the problem, suggest corrective actions and implement workable solutions









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Ensure food safety at the workplace	30	70	-	-
PC1. identify the biological, chemical, and physical hazards at various stages of food processing. Stages: procurement of raw material; production, manufacturing, distribution, delivery of finished product, etc.	-	-	-	-
PC2. implement food safety procedures and regulatory policies at the food processing workplace. Policies: Visitor's Policy, Health declaration policy, Jewellery policy, Quality, and safety policy	-	-	-	-
PC3. ensure that the materials are adequately isolated to prevent them from contamination. Materials: raw materials, processed materials, finished goods, etc. Contamination: Physical, Chemical, Biological & shop floor environment	-	-	-	-
PC4. establish and follow Good Manufacturing Practices (GMPs) laid down in applicable Food Safety and Standards Authority of India (FSSAI) guidelines. Good Manufacturing Practices (GMPs): location and layout(ergonomics), cleaning and sanitation, equipment and containers, pest control, facilities (lighting, water supply, drainage and waste disposal, air quality and ventilation), food storage, transportation, and distribution etc.	-	-	-	-
PC5. establish and follow allergen management system for handling and storage of raw materials	-	-	-	-
PC6. establish and follow monitoring systems like Hazard Analysis Critical Control Point (HACCP), product information and consumer awareness, product recall and withdrawal, and traceability HACCP: Hazard identification, identification of critical control points, establish critical limits, corrective and preventive action. Product information and consumer awareness: Product labelling and consumer education. Traceability: forward and backward traceability	-	-	_	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC7. take appropriate action in instances such as VACCP (Vulnerability Assessment Critical Control Points) and TACCP (Threat Assessment Critical Control Points)	-	-	-	-
PC8. plan, conduct, manage, consolidate outcomes, and close corrective actions of workplace audit on food safety as per FSSAI guidelines, address the nonconformance with root cause analysis (RCA), corrective action preventive action(CAPA)	-	-	-	-
PC9. address issues pertaining to food safety and quality reported by the team members	-	-	-	-
PC10. record information such as food safety regulations followed, inspections done, faults observed, etc. as per standard procedure	-	-	-	-
PC11. organize trainings and workshops on food safety aspects such as Good Manufacturing Practices (GMP), HACCP, VACCP, TACCP, etc.	-	-	-	-
NOS Total	30	70	-	-









National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9904
NOS Name	Ensure food safety at the workplace
Sector	Food Processing
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022









FIC/N9903: Ensure workplace health and safety

Description

This unit is about following health and safety procedures at the food processing workplace.

Scope

The scope covers the following:

- Follow preventive measures to avoid accidents
- Deal with emergencies
- Manage infection control

Elements and Performance Criteria

Follow preventive measures to avoid accidents

To be competent, the user/individual on the job must be able to:

- **PC1.** wear appropriate personal protective equipment (PPE) as per task requirements. PPE: gloves, hairnets, masks, ear plugs, goggles, shoes etc.
- **PC2.** identify job-site hazardous work and possible causes of risk or accident at the workplace
- **PC3.** deal with hazards safely and appropriately to ensure safety of self and others
- **PC4.** ensure that the equipment used (such as for lifting and carrying materials, power tools, etc.) are maintained effectively
- **PC5.** implement organisational safety protocols to prevent accidents and hazards
- **PC6.** ensure that general health and safety equipment are readily available at all times
- PC7. ensure that common hazard signs are displayed properly wherever required
- **PC8.** use various types of fire extinguishers effectively
- **PC9.** train the workforce on accident prevention techniques required at the workplace. Accident prevention techniques: role of appropriate PPE; use of fire extinguishers, dealing with hazards; identification of risks that could lead to accidents; safety protocols followed to avoid accidents; role of different types of hazard signs, safe lifting and carrying practices, etc.

Deal with emergencies

To be competent, the user/individual on the job must be able to:

- **PC10.** follow workplace emergency and evacuation procedures
- **PC11.** use safe methods to free a person from electrocution
- **PC12.** administer appropriate first aid to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning, etc.
- **PC13.** provide artificial respiration and cardio-pulmonary resuscitation (CPR) in various instances (e.g., cardiac arrest)
- **PC14.** report any identified breaches in health, safety and security policies and procedures to the concerned authority









PC15. train the workforce on emergency procedures to be followed at the workplace. Emergency procedures: safe evacuation; treating a person from electrocution; immediate first aid to be given at times of cuts, bleeding, burns, choking, electric shock, poisoning, etc.; administering artificial respiration and cardio-pulmonary resuscitation (CPR); escalating issues beyond own scope, etc.

Manage infection control

To be competent, the user/individual on the job must be able to:

- **PC16.** follow and enforce Good Hygiene Practices (GHP) among the team. GHP: washing hands regularly, reporting personal health issues to the concerned, undertaking preventive health check-ups at regular intervals, getting vaccinated as per standard procedures whenever required, etc.
- **PC17.** identify the type of infection spread in discussion with designated personnel and relevant sources. Type of infection spread: severity; precautions to be taken; safety protocols to be followed during spread; sanitisers to be used, etc.
- **PC18.** ensure the work area, equipment and related facilities are being sanitised effectively as per organisational schedule and work requirements
- **PC19.** ensure that materials used for sanitisation are stored appropriately and readily available at times of need
- **PC20.** take appropriate action at times of illness to self and others in the team
- **PC21.** train the workforce on infection control practices followed at the workplace. Infection control practices: precautions to be taken; types of sanitisers to be used; ensuring appropriate sanitization of self and work area; reporting illness to self and others promptly, etc.
- **PC22.** review standard operating procedures (SOPs) as per organisational schedule to ensure compliance with regulatory requirements
- PC23. ensure periodic health check-up of all workers in compliance with FSSAI guidelines
- **PC24.** provide regulatory support and process improvements which have an impact on regulatory affairs related to quality and safety assurance in respective departments

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** meaning of 'hazards' and 'risks'
- **KU2.** various types of risks, hazards and accidents at the workplace and their possible causes
- **KU3.** standard practices to be followed to control and prevent risks, hazards, and accidents
- **KU4.** where to find all the general health and safety equipment in the workplace
- **KU5.** parameters to be assessed during review of SOPs and compliances
- **KU6.** how to improve regulations and processes in an organisation as per required quality and safety standards
- **KU7.** procedure to conduct audits pertaining to workplace health and safety
- **KU8.** parameters to be assessed during health and safety audits and acceptability levels of appropriateness
- **KU9.** how to address team issues relating to workplace health and safety
- **KU10.** documents and records to be maintained in the work process









- **KU11.** types of personal protective equipment used such as eye protection, hard hats, gloves apron, rubber boots, etc. and its importance while conducting the tasks
- **KU12.** how to deal with various types of hazards safely and appropriately
- **KU13.** how to ensure that the equipment used is maintained effectively
- **KU14.** preventative measures and remedial actions to be taken to avoid accidents
- **KU15.** various types of safety signs and their relevance at the workplace
- **KU16.** various causes of fire, ways to prevent them and rescue techniques to be followed at times of fire
- **KU17.** use of different types of fire extinguishers
- **KU18.** how to train the workforce on various accident prevention techniques
- **KU19.** workplace emergency and evacuation procedures
- **KU20.** how to administer immediate first aid to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning, etc.
- **KU21.** procedure followed for providing artificial respiration and cardio-pulmonary resuscitation (CPR) to the affected
- **KU22.** impact of breach in health, safety and security policies and procedures on self, team, and work process
- KU23. how to train the workforce on emergency procedures to be followed at the workplace
- **KU24.** information sources and the factors to be considered for determining the type of infection
- KU25. procedure to carry out sanitization of work area, equipment, and related facilities
- **KU26.** how to act at times of illness to self and others at the workplace
- **KU27.** train the workforce on infection control practices followed at the workplace
- **KU28.** storing sanitization materials appropriately

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write an accident/incident report in local language or English
- **GS2.** read and comprehend basic content to read labels, charts, signages and symbols
- **GS3.** read and comprehend basic English to read product manuals for safe operation
- **GS4.** question coworkers appropriately in order to clarify instructions and other issues
- **GS5.** make appropriate decisions pertaining to the concerned area of work regarding the work objective, span of authority, responsibility, laid down procedure and guidelines
- **GS6.** plan and organize the work schedule, work area, tools, equipment, and materials for improved productivity
- **GS7.** identify probable solutions to the problems in hand
- **GS8.** evaluate proposed solution with respect to key priorities and considerations
- **GS9.** seek official and authorised sources of help and guidance to resolve problems that cannot be solved at one's level of authority
- **GS10.** identify cause and effect relations in their area of work to anticipate potential problems and their solution









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Follow preventive measures to avoid accidents	13	31	-	-
PC1. wear appropriate personal protective equipment (PPE) as per task requirements. PPE: gloves, hairnets, masks, ear plugs, goggles, shoes etc.	-	-	-	-
PC2. identify job-site hazardous work and possible causes of risk or accident at the workplace	-	-	-	-
PC3. deal with hazards safely and appropriately to ensure safety of self and others	-	-	-	-
PC4. ensure that the equipment used (such as for lifting and carrying materials, power tools, etc.) are maintained effectively	-	-	-	-
PC5. implement organisational safety protocols to prevent accidents and hazards	-	-	-	-
PC6. ensure that general health and safety equipment are readily available at all times	-	-	-	-
PC7. ensure that common hazard signs are displayed properly wherever required	-	-	-	-
PC8. use various types of fire extinguishers effectively	-	-	-	-
PC9. train the workforce on accident prevention techniques required at the workplace. Accident prevention techniques: role of appropriate PPE; use of fire extinguishers, dealing with hazards; identification of risks that could lead to accidents; safety protocols followed to avoid accidents; role of different types of hazard signs, safe lifting and carrying practices, etc.	_	_	_	-
Deal with emergencies	8	18	-	-
PC10. follow workplace emergency and evacuation procedures	-	-	-	-
PC11. use safe methods to free a person from electrocution	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. administer appropriate first aid to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning, etc.	-	-	-	-
PC13. provide artificial respiration and cardio-pulmonary resuscitation (CPR) in various instances (e.g., cardiac arrest)	-	-	-	-
PC14. report any identified breaches in health, safety and security policies and procedures to the concerned authority	-	-	-	-
PC15. train the workforce on emergency procedures to be followed at the workplace. Emergency procedures: safe evacuation; treating a person from electrocution; immediate first aid to be given at times of cuts, bleeding, burns, choking, electric shock, poisoning, etc.; administering artificial respiration and cardio-pulmonary resuscitation (CPR); escalating issues beyond own scope, etc.	-	-	-	-
Manage infection control	9	21	-	-
PC16. follow and enforce Good Hygiene Practices (GHP) among the team. GHP: washing hands regularly, reporting personal health issues to the concerned, undertaking preventive health check-ups at regular intervals, getting vaccinated as per standard procedures whenever required, etc.	-	-	-	-
PC17. identify the type of infection spread in discussion with designated personnel and relevant sources. Type of infection spread: severity; precautions to be taken; safety protocols to be followed during spread; sanitisers to be used, etc.	-	-	-	-
PC18. ensure the work area, equipment and related facilities are being sanitised effectively as per organisational schedule and work requirements	-	-	-	-
PC19. ensure that materials used for sanitisation are stored appropriately and readily available at times of need	-	-	-	-
PC20. take appropriate action at times of illness to self and others in the team	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. train the workforce on infection control practices followed at the workplace. Infection control practices: precautions to be taken; types of sanitisers to be used; ensuring appropriate sanitization of self and work area; reporting illness to self and others promptly, etc.	-	-	-	-
PC22. review standard operating procedures (SOPs) as per organisational schedule to ensure compliance with regulatory requirements	-	-	-	-
PC23. ensure periodic health check-up of all workers in compliance with FSSAI guidelines	-	-	-	-
PC24. provide regulatory support and process improvements which have an impact on regulatory affairs related to quality and safety assurance in respective departments	-	-	-	-
NOS Total	30	70	-	-









National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9903
NOS Name	Ensure workplace health and safety
Sector	Food Processing
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022









FIC/N9902: Work effectively in an organisation

Description

This unit is about working effectively with others.

Scope

The scope covers the following:

- Communicate effectively
- Work in a team effectively
- Respect diversity

Elements and Performance Criteria

Communicate effectively

To be competent, the user/individual on the job must be able to:

- **PC1.** obtain complete information and instructions from designated personnel
- PC2. reciprocate understanding and seek clarifications whenever required
- **PC3.** provide information accurately and clearly
- **PC4.** use inclusive language (verbal, non-verbal and written) that is gender, disability and culturally sensitive

Work in a team effectively

To be competent, the user/individual on the job must be able to:

- **PC5.** plan tasks to be performed as per priority and need
- **PC6.** consult with and assist others to maximize effectiveness and efficiency at work
- **PC7.** escalate problems and grievances beyond own scope to the concerned authority
- **PC8.** take appropriate action to resolve conflicts at the workplace

Respect diversity

To be competent, the user/individual on the job must be able to:

- **PC9.** maintain a gender-neutral behaviour with everyone at the workplace
- PC10. empathise with People with Disabilities (PwD) and offer help, if required
- **PC11.** recognise and report incidents of harassment and discrimination to appropriate authority

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** organizational quality procedures and processes associated with work
- **KU2.** standards, policies, and procedures followed in the organization relevant to employment, harassment, discrimination and performance conditions
- **KU3.** reporting structure, inter-dependent functions, lines, and procedures applicable at the workplace









- **KU4.** different types of harassment and discrimination based on gender, disability, caste, religion, and culture
- **KU5.** components of effective communication and its importance
- **KU6.** importance of teamwork in organizational and individual success
- **KU7.** importance of ethics and discipline for professional success
- **KU8.** how to express and address grievances appropriately and effectively
- **KU9.** importance and ways of managing interpersonal conflict effectively
- **KU10.** different types of disabilities and the challenges faced by persons with disability (PwD)
- KU11. laws, acts and provisions defined for PwD
- KU12. importance of gender sensitivity and equality
- **KU13.** legislations, grievance redressal mechanisms, and penalties against harassment in the workplace

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** communicate information, doubts and concerns about work related matters in local language or Hindi/English
- GS2. read and interpret information given in local language or Hindi/English
- **GS3.** establish priorities and deadlines in consultation with other and record them
- **GS4.** be punctual
- GS5. listen to others concerns and doubts carefully and address them
- **GS6.** be courteous









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Communicate effectively	8	13	-	-
PC1. obtain complete information and instructions from designated personnel	2	3	-	-
PC2. reciprocate understanding and seek clarifications whenever required	2	3	-	-
PC3. provide information accurately and clearly	2	3	-	-
PC4. use inclusive language (verbal, nonverbal and written) that is gender, disability and culturally sensitive	2	4	-	-
Work in a team effectively	8	14	-	-
PC5. plan tasks to be performed as per priority and need	2	4	-	-
PC6. consult with and assist others to maximize effectiveness and efficiency at work	2	3	-	-
PC7. escalate problems and grievances beyond own scope to the concerned authority	2	3	-	-
PC8. take appropriate action to resolve conflicts at the workplace	2	4	-	-
Respect diversity	6	12	-	-
PC9. maintain a gender-neutral behaviour with everyone at the workplace	2	4	-	-
PC10. empathise with People with Disabilities (PwD) and offer help, if required	2	4	-	-
PC11. recognise and report incidents of harassment and discrimination to appropriate authority	2	4	-	-
NOS Total	22	39	-	-









National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9902
NOS Name	Work effectively in an organisation
Sector	Food Processing
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022









SGJ/N1702: Optimize resource utilization at workplace

Description

This unit is about adopting sustainable practices and optimizing use of resources, especially material, energy and waste, in day-to-day operations at work

Scope

The scope covers the following:

- Material conservation practices
- Energy/electricity conservation practices
- Effective waste management/recycling practices

Elements and Performance Criteria

Material conservation practices

To be competent, the user/individual on the job must be able to:

- **PC1.** identify ways to optimize usage of material including water in various tasks/activities/processes
- **PC2.** check for spills/leakages in various tasks/activities/processes
- **PC3.** plug spills/leakages and escalate to appropriate authority if unable to rectify
- **PC4.** carry out routine cleaning of tools, machines and equipment

Energy/electricity conservation practices

To be competent, the user/individual on the job must be able to:

- **PC5.** identify ways to optimize usage of electricity/energy in various tasks/activities/processes
- **PC6.** check if the equipment/machine is functioning normally before commencing work and rectify wherever required
- **PC7.** report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment
- **PC8.** ensure electrical equipment and appliances are properly connected and turned off when not in use

Effective waste management/recycling practices

To be competent, the user/individual on the job must be able to:

- **PC9.** identify recyclable and non-recyclable, and hazardous waste generated
- **PC10.** segregate waste into different categories
- **PC11.** dispose non-recyclable waste appropriately
- **PC12.** deposit recyclable and reusable material at identified location
- PC13. follow processes specified for disposal of hazardous waste

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:









- **KU1.** potential hazards, risks and threats based on the nature of work
- **KU2.** layout of the workstation and electrical and thermal equipment used
- **KU3.** organizations procedures for minimizing waste
- KU4. efficient and inefficient utilization of material and water
- **KU5.** ways of efficiently managing material and water in the process
- **KU6.** basics of electricity and prevalent energy efficient devices
- KU7. ways to recognize common electrical problems
- KU8. common practices of conserving electricity
- **KU9.** usage of different colours of dustbins
- **KU10.** categorization of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics
- **KU11.** waste management and methods of waste disposal
- **KU12.** common sources of pollution and ways to minimize it

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** record data on waste disposal at workplace
- **GS2.** complete statutory documents relevant to safety and hygiene
- GS3. read Standard Operating Practices (SOP) documents
- **GS4.** communicate with colleagues on the significance of greening of jobs
- GS5. make timely decisions for efficient utilization of resources
- **GS6.** complete tasks efficiently and accurately within stipulated time
- **GS7.** work with supervisors/team members to carry out work related tasks
- GS8. identify cause and effect of greening of jobs









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Material conservation practices	4	8	-	-
PC1. identify ways to optimize usage of material including water in various tasks/activities/processes	1	2	-	-
PC2. check for spills/leakages in various tasks/activities/processes	1	2	-	-
PC3. plug spills/leakages and escalate to appropriate authority if unable to rectify	1	2	-	-
PC4. carry out routine cleaning of tools, machines and equipment	1	2	_	-
Energy/electricity conservation practices	4	8	-	-
PC5. identify ways to optimize usage of electricity/energy in various tasks/activities/processes	1	2	-	-
PC6. check if the equipment/machine is functioning normally before commencing work and rectify wherever required	1	2	-	-
PC7. report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment	1	2	-	-
PC8. ensure electrical equipment and appliances are properly connected and turned off when not in use	1	2	-	-
Effective waste management/recycling practices	5	10	-	-
PC9. identify recyclable and non-recyclable, and hazardous waste generated	1	2	-	-
PC10. segregate waste into different categories	1	2	-	-
PC11. dispose non-recyclable waste appropriately	1	2	-	-
PC12. deposit recyclable and reusable material at identified location	1	2	-	-
PC13. follow processes specified for disposal of hazardous waste	1	2	-	-









Assessment Criteria for Outcomes	Theory	Practical	Project	Viva
	Marks	Marks	Marks	Marks
NOS Total	13	26	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SGJ/N1702
NOS Name	Optimize resource utilization at workplace
Sector	Green Jobs
Sub-Sector	Other Green Jobs
Occupation	Resource Optimization
NSQF Level	3
Credits	1
Version	1.0
Last Reviewed Date	10/08/2022
Next Review Date	31/03/2025
NSQC Clearance Date	01/03/2023

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

- 1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
- 2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
- 3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
- 4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below).
- 5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criterion.
- 6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
- 7. In case of unsuccessful completion, the trainee may seek reassessment on the









Qualification Pack.

Minimum Aggregate Passing % at QP Level: 70

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N9905.Establish facilities for artisanal food production	36	64	-	-	100	25
FIC/N7101.Prepare for chocolate production	18	82	-	-	100	20
FIC/N7102.Carry out chocolate production	29	71	-	-	100	15
FIC/N9904.Ensure food safety at the workplace	30	70	-	-	100	10
FIC/N9903.Ensure workplace health and safety	30	70	-	-	100	10
FIC/N9902.Work effectively in an organisation	22	39	-	-	61	10
SGJ/N1702.Optimize resource utilization at workplace	13	26	0	0	39	10
Total	178	422	0	0	600	100









Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
SOP	Standard Operating Procedures
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualification Pack
TVET	Technical and Vocational Education and Training
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
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NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
PwD	Persons with Disability









Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.









Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
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