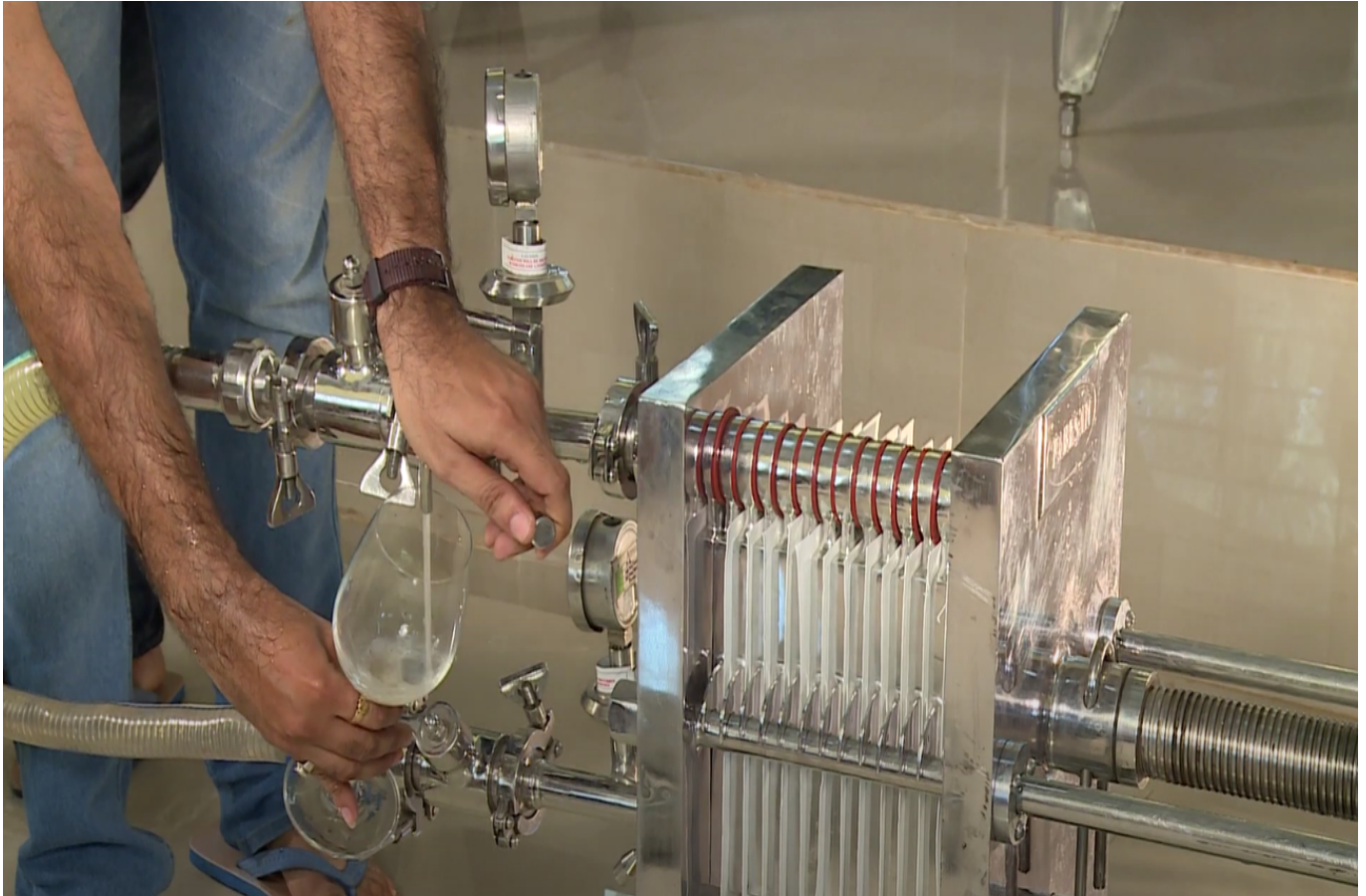GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

Artisanal Fruit Wine Maker

QP Code: FIC/Q0201

Version: 1.0

NSQF Level: 5

Food Industry Capacity & Skill Initiative || Shriram Bharatiya Kala kendra, 3rd floor, 1, Copernicus Marg, Mandi House, New Delhi
Delhi 110001

Contents

Qualification Pack

FIC/Q0201: Artisanal Fruit Wine Maker

Brief Job Description

The Artisanal Fruit Wine Maker plans and produces fruit wine from grapes, sapota, berries, mangoes, kiwis, oranges, plums, cherries, etc. in adherence with the standard work practices.

Personal Attributes

The job requires the individual to have good eyesight, physical strength, patience, attention to detail, and ability to work under pressure.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. FIC/N0201: Prepare for fruit wine production

2. FIC/N0202: Produce fruit wines

3. FIC/N9904: Ensure food safety at the workplace

4. FIC/N9903: Ensure workplace health and safety

5. FIC/N9902: Work effectively in an organisation

6. SGJ/N1702: Optimize resource utilization at workplace

7. FIC/N9905: Establish facilities for artisanal food production

Qualification Pack (QP) Parameters

Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing-Fruits and Vegetables
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL

Minimum Educational Qualification & Experience	12th Class (science stream) OR 10th Class (and 2 years course in relevant stream) OR 10th Class with 2 Years of experience relevant experience OR 10th Class + I.T.I (2 years)
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	29/07/2021
Next Review Date	29/07/2024
Deactivation Date	29/07/2024
NSQC Approval Date	29/07/2021
Version	1.0
Reference code on NQR	2021/FI/FICSI/04380
NQR Version	1

FIC/N0201: Prepare for fruit wine production

Description

This NOS unit is about performing various tasks for ensuring preparedness for fruit wine production.

Scope

The scope covers the following :

- Plan for fruit wine production
- Organise the tools, equipment and related materials

Elements and Performance Criteria

Plan for fruit wine production

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

PC1. obtain the requirements such as order, quantity, and type of fruit wine to be produced from respective sources such as customers, enterprises, etc. Type of fruit: based on appearance, colour, texture, seeds maturity, grade, etc.)

PC2. estimate the material and manpower requirements for production process. Material: raw material, ingredients, packaging material, etc.

PC3. plan the batch size of fruit wine based on the production order and machine capacity

Organise the tools, equipment and related materials

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

PC4. assemble the materials required for the fruit wine production such as fruits, nylon straining bag, fermentation barrel, hydrometer, etc.

PC5. inspect the fruits, raw materials, tools, equipment, etc. for desired quality and quantity. Tools, equipment: bottling machine, pasteurizer, etc.

PC6. fix faults, if any, in the tools and equipment (such as cutter, slicer blades, etc.) safely and appropriately

PC7. replace and/or discard tools, equipment and materials declared unfit for use

PC8. verify the quality of fruit wine production materials by referring to the lab reports

PC9. clean the tools, equipment and materials to be used thoroughly

PC10. maintain a tidy workplace free from unwanted and hazardous materials

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. policies and procedure pertaining to obtaining raw and packaging materials, handling hazards, production equipment and their maintenance

KU2. various raw materials (including fruits), products (such as variety of fruit wine) and the process for obtaining them

KU3. factors for the estimation of material and manpower requirements

KU4. considerations for planning batch size and machine utilisation for fruit wine production

KU5. tools and equipment used for fruit wine production and their inspection techniques

KU6. procedure to check the quality of fruits, ingredients and various materials (raw materials and packaging materials) used in fruit wine production

KU7. various faults that can occur to the tools, equipment and machinery used in the process

KU8. various types of cleaning agents and tools used for the upkeep of production machinery

KU9. manufacturers' instructions and machine specifications pertaining to the machinery used for fruit wine production

KU10. various types of defects in fruits, raw materials and packaging materials

KU11. procedure for replacing and discarding materials unfit for production

Generic Skills (GS)

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

GS1. record the information such as materials obtained, batch details, characteristics of fruit wine to be produced, etc. as and when required during the process effectively

GS2. read and interpret information from sources such as instruction manuals, job specification sheets, manufacturer guidelines and organizational documents

GS3. communicate with others effectively

GS4. plan and prioritize various tasks

GS5. be always punctual and courteous

GS6. organize all process/equipment manuals to access information easily

GS7. discuss task lists, schedules, and activities with others effectively

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Plan for fruit wine production	**15**	**15**	**-**	**5**
PC1. obtain the requirements such as order, quantity, and type of fruit wine to be produced from respective sources such as customers, enterprises, etc. Type of fruit: based on appearance, colour, texture, seeds maturity, grade, etc.)	5	5	-	2
PC2. estimate the material and manpower requirements for production process. Material: raw material, ingredients, packaging material, etc.	5	5	-	1
PC3. plan the batch size of fruit wine based on the production order and machine capacity	5	5	-	2
Organise the tools, equipment and related materials	**25**	**25**	**-**	**15**
PC4. assemble the materials required for the fruit wine production such as fruits, nylon straining bag, fermentation barrel, hydrometer, etc.	3	4	-	2
PC5. inspect the fruits, raw materials, tools, equipment, etc. for desired quality and quantity. Tools, equipment: bottling machine, pasteurizer, etc.	4	3	-	3
PC6. fix faults, if any, in the tools and equipment (such as cutter, slicer blades, etc.) safely and appropriately	3	4	-	2
PC7. replace and/or discard tools, equipment and materials declared unfit for use	4	3	-	2
PC8. verify the quality of fruit wine production materials by referring to the lab reports	3	4	-	2
PC9. clean the tools, equipment and materials to be used thoroughly	4	3	-	2
PC10. maintain a tidy workplace free from unwanted and hazardous materials	4	4	-	2
NOS Total	**40**	**40**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N0201
NOS Name	Prepare for fruit wine production
Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing-Fruits and Vegetables
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	29/07/2021
Next Review Date	29/07/2024
NSQC Clearance Date	29/07/2021

FIC/N0202: Produce fruit wines

Description

This NOS unit is about performing various tasks for producing non-alcoholic fruit wine in adherence with standard work practices.

Scope

The scope covers the following :

- Prepare fruits for making wine
- Extract fruit juice (must)
- Ferment the fruit juice (must)
- Clarify the fruit wine
- Carry out aging of the fruit wine
- Package, label and store fruit wines
- Dispatch the fruit wine

Elements and Performance Criteria

Prepare fruits for making wine

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

PC1. use scientific markers to measure the sugar content, (potential of hydrogen) pH and titratable acidity of the fruit

PC2. apply standard methods for washing the fruits thoroughly

PC3. transfer the fruits from the washing tank to the inspection station to sort them appropriately

PC4. transfer fruits to the inspection station after sorting them

PC5. inspect fruits properly and remove damaged, blemished, bruised, rotten fruit and any unwanted material

PC6. dispose the waste as per safe work practices

Extract fruit juice (must)

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

PC7. remove pith, stem and seeds of the type of fruit/s to be used for wine production. Pith and seeds: for oranges, apricots, plum, litchi, etc. Stem: for apple, pear, etc.

PC8. transfer fruits to the juice extractors or fruit mills depending on the type of fruits for juice extraction. Juice extractors: Rotary press, double screw extractor, spiral juice extractor, pneumatic press, etc.

PC9. collect juice flowing through the discharge outlet in the collection tank appropriately ensuring zero wastage

Ferment the fruit juice (must)

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

PC10. transfer the juice (must) obtained in barrels for fermentation for fruit wine production

PC11. add appropriate amount of yeast (saccharomyces cerevisiae) into steel tanks or oak barrels with chilled juice for fermentation of wine

PC12. set the required temperature of fruit wine for cooling using a glycol cooling system

PC13. use appropriate instruments to monitor the status of mixture in the tank by examining alcoholic content, pH, etc. Instruments: pH meter, refractometer, hydrometer, etc.

PC14. transfer the fruit wine in a clean barrel for secondary/MLF (Malolactic Fermentation) after adding malolactic bacteria

PC15. check and ensure that the TA (Titratable Acid) is within permissible limits

PC16. control the release of carbon dioxide during fermentation as per the standard operating procedure

Clarify the fruit wine

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

PC17. use clarifying/fining agents to remove or reduce the concentration of any undesirable constituents from the fermented fruit wine. Undesirable constituents: dead yeast cell, tannin, etc. Clarifying agents: proteins (gelatin), polysaccharides (starch), synthetic polymers (polyvinyl polypyrolidone), etc.

PC18. perform relevant tests for testing the stability of the wine after the maturation process. Tests: degree brix, pH, microbial analysis, etc.

PC19. carry out wine filtration to screen the balance of fine particles

PC20. carry out pasteurization by heating and cooling the fruit wine after clarification at specified temperatures

Carry out aging of the fruit wine

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

PC21. store the wine produced for aging in designated containers (such as oak barrels, bottles, carboys, etc.) appropriately

PC22. maintain adequate conditions of the wine cellar to ensure maturation of the fruit wine. Adequate conditions: sulphur dioxide (SO_2) levels, temperature, humidity, etc.

PC23. identify the stage of fruit wine maturation by chemical analysis and tasting

PC24. carry out a series of rackings for clarification and stabilisation as required

PC25. remove alcohol content in fruit wine by applying reverse osmosis and distillation

PC26. test the matured fruit wine to ensure there is no microbial contamination and is fit for packaging by performing microbial testing. Microbial testing: direct plating, membrane filtration, etc.

PC27. inspect the fruit wine produced for discrepancies and take suitable action immediately

Package, label and store fruit wines

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

PC28. store the fruit wine produced in optimal conditions. Optimal conditions: required temperature, humidity; cork or screw cap in tin capsules, etc.

PC29. label the fruit wines as per Food Safety and Standards Authority of India (FSSAI) specifications

PC30. palletize the cases with the fruit wine bottles

PC31. pack and label the fruit wines appropriately

PC32. move the packaged wine to designated area safely

PC33. document information as per organisational practices. Information: raw materials, vendor/supplier, packaging materials, product details, production sequence, equipment, production plan with details, process details, types of fruit wines produced, finished products, deviations in production process, etc.

PC34. store the tools, equipment and materials used for production safely in designated places

PC35. maintain the tools, equipment and materials used for production as per standard practices

Dispatch the fruit wine

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

PC36. communicate the delivery instructions to the designated vendor accurately

PC37. inspect the loading vehicle to ascertain safe conditions for transportation (such as free from water, pest infestations, hazards, desired levels of cleanliness, etc.)

PC38. load the packaged fruit wine in the goods carrying vehicle safely

PC39. confirm that the required quality and quantity of packaged wine has been loaded in the vehicle by referring the delivery documents

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. policies and procedures related to fruit wine production

KU2. various types of fruits and the type of wine produced from them

KU3. tasks to be performed and processes involved in fruit wine production

KU4. tools, equipment and machinery used for fruit wine production

KU5. methods to measure parameters such as sugar content, pH, titratable acidity, etc. in fruits

KU6. various signs of damaged fruits and their inspection techniques

KU7. techniques for extraction of juice (must) from various types of fruits

KU8. process of fermentation and the steps involved for fermenting fruits for wine production

KU9. instruments used for monitoring the status of fermented mixture

KU10. process of clarification of fruit wine, tests performed, fining agents used, etc.

KU11. process of wine filtration, techniques for carrying out filtration of fruit wine, materials used, etc.

KU12. pasteurization and the specified temperature range to be set for refinement of fruit wine

KU13. optimal conditions required for aging and maturation of fruit wine

KU14. various types of chemical analysis and tasting for identifying the stage of fruit wine maturation

KU15. procedure to carry out rackings for clarification and stabilisation of fruit wine

KU16. process of reverse osmosis and distillation for maintaining alcohol content in fruit wine

KU17. testing procedure of fruit wine for checking the microbial contamination and confirming suitability for packaging

KU18. procedure for storing, packing and labelling the fruit wine and the materials used in the process

KU19. instances that need to reported to the concerned personnel and the methods used

KU20. types of information that is documented and the organisational practices for documenting them

KU21. Food Safety and Standards Authority of India (FSSAI) guidelines for production, packaging, labelling, storing, handling fruit wine and raw material

KU22. procedure to store the tools, equipment and materials used for production safely

KU23. procedure to maintain the tools, equipment and materials used for fruit wine production

KU24. how to coordinate with vendors for fruit wine transportation and delivery

KU25. how to inspect the loading vehicle for the presence of undesirable materials

KU26. importance of delivery note in the dispatch process

KU27. safe disposal of waste and unwanted materials at the workplace

Generic Skills (GS)

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

GS1. record the information (such as type of wine produced, its characteristics, batches produced, quantity to be dispatched, etc.) as required in the job

GS2. read equipment manuals and process documents to understand the equipment's operation and process requirement

GS3. plan and prioritise tasks effectively

GS4. communicate with others effectively

GS5. organize all the resources used (such as raw materials, tools, equipment, process charts, etc.) appropriately

GS6. analyse problems as encountered during the work process and take suitable action against it

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare fruits for making wine	**6**	**8**	**-**	**-**
PC1. use scientific markers to measure the sugar content, (potential of hydrogen) pH and titratable acidity of the fruit	-	-	-	-
PC2. apply standard methods for washing the fruits thoroughly	-	-	-	-
PC3. transfer the fruits from the washing tank to the inspection station to sort them appropriately	-	-	-	-
PC4. transfer fruits to the inspection station after sorting them	-	-	-	-
PC5. inspect fruits properly and remove damaged, blemished, bruised, rotten fruit and any unwanted material	-	-	-	-
PC6. dispose the waste as per safe work practices	-	-	-	-
Extract fruit juice (must)	**3**	**3**	**-**	**-**
PC7. remove pith, stem and seeds of the type of fruit/s to be used for wine production. Pith and seeds: for oranges, apricots, plum, litchi, etc. Stem: for apple, pear, etc.	-	-	-	-
PC8. transfer fruits to the juice extractors or fruit mills depending on the type of fruits for juice extraction. Juice extractors: Rotary press, double screw extractor, spiral juice extractor, pneumatic press, etc.	-	-	-	-
PC9. collect juice flowing through the discharge outlet in the collection tank appropriately ensuring zero wastage	-	-	-	-
Ferment the fruit juice (must)	**7**	**8**	**-**	**-**
PC10. transfer the juice (must) obtained in barrels for fermentation for fruit wine production	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. add appropriate amount of yeast (saccharomyces cerevisiae) into steel tanks or oak barrels with chilled juice for fermentation of wine	-	-	-	-
PC12. set the required temperature of fruit wine for cooling using a glycol cooling system	-	-	-	-
PC13. use appropriate instruments to monitor the status of mixture in the tank by examining alcoholic content, pH, etc. Instruments: pH meter, refractometer, hydrometer, etc.	-	-	-	-
PC14. transfer the fruit wine in a clean barrel for secondary/MLF (Malolactic Fermentation) after adding malolactic bacteria	-	-	-	-
PC15. check and ensure that the TA (Titratable Acid) is within permissible limits	-	-	-	-
PC16. control the release of carbon dioxide during fermentation as per the standard operating procedure	-	-	-	-
Clarify the fruit wine	**4**	**8**	**-**	**-**
PC17. use clarifying/fining agents to remove or reduce the concentration of any undesirable constituents from the fermented fruit wine. Undesirable constituents: dead yeast cell, tannin, etc. Clarifying agents: proteins (gelatin), polysaccharides (starch), synthetic polymers (polyvinyl polypyrolidone), etc.	-	-	-	-
PC18. perform relevant tests for testing the stability of the wine after the maturation process. Tests: degree brix, pH, microbial analysis, etc.	-	-	-	-
PC19. carry out wine filtration to screen the balance of fine particles	-	-	-	-
PC20. carry out pasteurization by heating and cooling the fruit wine after clarification at specified temperatures	-	-	-	-
Carry out aging of the fruit wine	**7**	**17**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. store the wine produced for aging in designated containers (such as oak barrels, bottles, carboys, etc.) appropriately	-	-	-	-
PC22. maintain adequate conditions of the wine cellar to ensure maturation of the fruit wine. Adequate conditions: sulphur dioxide (SO2) levels, temperature, humidity, etc.	-	-	-	-
PC23. identify the stage of fruit wine maturation by chemical analysis and tasting	-	-	-	-
PC24. carry out a series of rackings for clarification and stabilisation as required	-	-	-	-
PC25. remove alcohol content in fruit wine by applying reverse osmosis and distillation	-	-	-	-
PC26. test the matured fruit wine to ensure there is no microbial contamination and is fit for packaging by performing microbial testing. Microbial testing: direct plating, membrane filtration, etc.	-	-	-	-
PC27. inspect the fruit wine produced for discrepancies and take suitable action immediately	-	-	-	-
Package, label and store fruit wines	**8**	**12**	**-**	**-**
PC28. store the fruit wine produced in optimal conditions. Optimal conditions: required temperature, humidity; cork or screw cap in tin capsules, etc.	-	-	-	-
PC29. label the fruit wines as per Food Safety and Standards Authority of India (FSSAI) specifications	-	-	-	-
PC30. palletize the cases with the fruit wine bottles	-	-	-	-
PC31. pack and label the fruit wines appropriately	-	-	-	-
PC32. move the packaged wine to designated area safely	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC33. document information as per organisational practices. Information: raw materials, vendor/supplier, packaging materials, product details, production sequence, equipment, production plan with details, process details, types of fruit wines produced, finished products, deviations in production process, etc.	-	-	-	-
PC34. store the tools, equipment and materials used for production safely in designated places	-	-	-	-
PC35. maintain the tools, equipment and materials used for production as per standard practices	-	-	-	-
Dispatch the fruit wine	**4**	**5**	**-**	**-**
PC36. communicate the delivery instructions to the designated vendor accurately	-	-	-	-
PC37. inspect the loading vehicle to ascertain safe conditions for transportation (such as free from water, pest infestations, hazards, desired levels of cleanliness, etc.)	-	-	-	-
PC38. load the packaged fruit wine in the goods carrying vehicle safely	-	-	-	-
PC39. confirm that the required quality and quantity of packaged wine has been loaded in the vehicle by referring the delivery documents	-	-	-	-
NOS Total	**39**	**61**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N0202
NOS Name	Produce fruit wines
Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing-Fruits and Vegetables
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	29/07/2021
Next Review Date	29/07/2024
NSQC Clearance Date	29/07/2021

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. 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

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 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.	-	-	-	-
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	25/11/2021
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021

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	25/11/2021
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021

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, non-verbal 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	25/11/2021
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021

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

Qualification Pack

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 Marks	Practical Marks	Project Marks	Viva 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	TBD
Version	1.0
Last Reviewed Date	25/11/2021
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021

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	25/11/2021
Next Review Date	25/11/2024
NSQC Clearance Date	25/11/2021

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 the proportion of marks for Theory and Skills Practical for each PC.

2. The assessment for the theory part will be based on the 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 the theory part for each candidate at each examination/training center (as per assessment criteria below).

5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

6. To pass the Qualification Pack assessment, 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/N0201.Prepare for fruit wine production	40	40	-	20	100	20
FIC/N0202.Produce fruit wines	39	61	-	35	100	20
FIC/N9904.Ensure food safety at the workplace	30	70	-	-	100	20
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	-	-	39	5
FIC/N9905.Establish facilities for artisanal food production	36	64	-	-	100	15
Total	**210**	**370**	**-**	**55**	**600**	**100**

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
MLF	Malolactic Fermentation
TA	Titratable Acid
pH	Power of Hydrogen
FSSAI	Food Safety and Standards Authority of India
GMPs	Good Manufacturing Practices
HACCP	Hazard Analysis Critical Control Point
VACCP	Vulnerability Assessment Critical Control Points
TACCP	Threat Assessment Critical Control Points
RCA	Root Cause Analysis
CAPA	Corrective Action Preventive Action
PPE	Personal Protective Equipment
CPR	Cardio-Pulmonary Resuscitation
GHP	Good Hygiene Practices
SOPs	Standard Operating Procedures
PwD	People with Disabilities

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	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	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	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	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	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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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.
Core skills or Generic Skills	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 and work environment. In the context of the OS, these include communication-related skills that are applicable to most job roles.