



Food Packaging Developer

QP Code: FIC/Q9302

Version: 1.0

NSQF Level: 5

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FIC/Q9302: Food Packaging Developer

Brief Job Description

A Food Packaging Developer is responsible to identify and design new packaging technologies. The person is responsible for changing the existing packaging of a product, modify the existing packaging material or change the material altogether meeting the standards set by FSSAI and organization.

Personal Attributes

The individual should have an excellent communication, designing, technical and problem-solving skills as well as have the ability to plan, organize, prioritize, calculate and handle pressure. The individual should have good team working abilities and have an inquisitive mind to carry out daily tasks.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [FIC/N9303: Prepare for developing packaging material](#)
2. [FIC/N9304: Perform tasks for testing packaging material](#)
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](#)

Qualification Pack (QP) Parameters

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

Minimum Educational Qualification & Experience	Graduate (Microbiology/Food technology/Biotechnology or allied disciplines) with 1 Year of experience Relevant experience OR 12th Class (and 3 years of diploma in relevant stream) with 1 Year of experience Relevant experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	NA
Next Review Date	NA
NSQC Approval Date	
Version	1.0

FIC/N9303: Prepare for developing packaging material

Description

This NOS is about performing various tasks for developing different types of packaging material.

Scope

The scope covers the following :

- Identify requirements for packaging
- Select appropriate vendor
- Prepare for testing

Elements and Performance Criteria

Identify requirements for packaging

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

- PC1.** obtain consumer and market research data based on trends, preferences, geographical location, religion, etc. from marketing team identify and select desired packaging equipment for packaging work
- PC2.** select packaging material in compliant with type of food to be placed
- PC3.**
 - identify key packaging parameters
 - Parameters: grammage, compressibility strength, seal strength, etc.
- PC4.** ensure that packaging specifications meet the requirements of regulatory client and company
- PC5.** liaise with marketing and purchasing department to understand the demand of food products
- PC6.** identify critical limits of the packaging material suitable to the food type

Select appropriate vendor

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

- PC7.** perform benchmarking of competitive packs with current packs
- PC8.**
 - identify vendors as per packaging material requirements and by following organizational procedures
 - Requirement: rigidity, flexibility, permeability, tear strength, etc.
- PC9.** collaborate with external stakeholders to explore new packaging ideas, designs etc. through visits, exhibitions, etc.
- PC10.** prepare and roll out the document for vendor sign off after finalization of vendor
- PC11.** develop alternate vendors for each packing RM as per organization policies and procedures

Prepare for testing

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

- PC12.** plan for risk assessment before execution of the process
- PC13.** receive and register samples for testing by following organizational procedures
- PC14.** select, check and calibrate the equipment and instruments used for packaging work
- PC15.** set parameters of packaging equipment as per the product requirement
- PC16.** prepare test sheet for each packing material as per organizational guidelines

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standards, policies, and procedures followed in the company relevant to food packaging
- KU2.** relevant occupational health and safety requirements applicable in the workplace
- KU3.** types and properties of packaging equipment
- KU4.** working and operating principles of packaging equipment
- KU5.** different tests done on packaging material
- KU6.** technicalities of different packaging material as per the demand
- KU7.** properties of packaging material
- KU8.** identification and management of vendors
- KU9.** how to document SOPs , product specifications, vendor specification etc.
- KU10.** development of risk assessment plan
- KU11.** coordination with different departments in the organization
- KU12.** calibration technique depending on the type of equipment
- KU13.** product parameters such as pH, moisture content, oil content, light sensitivity, etc.

Generic Skills (GS)

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

- GS1.** write common words/signs and set phrases used in the work
- GS2.** prepare checklists, reports, and fill out forms in local language or Hindi/English
- GS3.** perform arithmetic calculations of addition, subtraction, multiplication, and division processes
- GS4.** read and interpret data sheets, reports etc.
- GS5.** communicate information, doubts, and concerns about work related matters in local language or Hindi/English
- GS6.** use questioning to minimize misunderstandings
- GS7.** participate in workplace conversations and meetings and communicate by telephone in local language or Hindi/English
- GS8.** plan daily tasks to achieve maximum productivity
- GS9.** display courteous and helpful behaviour
- GS10.** establish priorities and deadlines in consultation with others and record them
- GS11.** be punctual and work as per agreed priorities
- GS12.** think through the problem, evaluate the possible solution(s), and suggest an optimum /best possible solution(s)
- GS13.** identify immediate or temporary solutions to resolve delays
- GS14.** make appropriate decisions regarding the responsibilities of the job role
- GS15.** respond to breakdowns and malfunction of equipment
- GS16.** respond to unsafe and hazardous working conditions
- GS17.** respond to security breaches

GS18. follow instructions carefully

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Identify requirements for packaging</i>	11	15	-	6
PC1. obtain consumer and market research data based on trends, preferences, geographical location, religion, etc. from marketing team identify and select desired packaging equipment for packaging work	-	-	-	-
PC2. select packaging material in compliant with type of food to be placed	-	-	-	-
PC3. <ul style="list-style-type: none"> identify key packaging parameters Parameters: grammage, compressibility strength, seal strength, etc. 	-	-	-	-
PC4. ensure that packaging specifications meet the requirements of regulatory client and company	-	-	-	-
PC5. liaise with marketing and purchasing department to understand the demand of food products	-	-	-	-
PC6. identify critical limits of the packaging material suitable to the food type	-	-	-	-
<i>Select appropriate vendor</i>	9	19	-	7
PC7. perform benchmarking of competitive packs with current packs	-	-	-	-
PC8. <ul style="list-style-type: none"> identify vendors as per packaging material requirements and by following organizational procedures Requirement: rigidity, flexibility, permeability, tear strength, etc. 	-	-	-	-
PC9. collaborate with external stakeholders to explore new packaging ideas, designs etc. through visits, exhibitions, etc.	-	-	-	-
PC10. prepare and roll out the document for vendor sign off after finalization of vendor	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. develop alternate vendors for each packing RM as per organization policies and procedures	-	-	-	-
<i>Prepare for testing</i>	10	16	-	7
PC12. plan for risk assessment before execution of the process	-	-	-	-
PC13. receive and register samples for testing by following organizational procedures	-	-	-	-
PC14. select, check and calibrate the equipment and instruments used for packaging work	-	-	-	-
PC15. set parameters of packaging equipment as per the product requirement	-	-	-	-
PC16. prepare test sheet for each packing material as per organizational guidelines	-	-	-	-
NOS Total	30	50	-	20

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9303
NOS Name	Prepare for developing packaging material
Sector	Food Processing
Sub-Sector	Generic
Occupation	Research and Development
NSQF Level	5
Credits	TBD
Version	1.0
Next Review Date	NA

FIC/N9304: Perform tasks for testing packaging material

Description

This NOS is about performing tasks to achieve optimum design and quality of packaging material.

Scope

The scope covers the following :

- Perform trials for testing packaging material
- Ensure packaging material meets regulatory standards
- Post-trial activities

Elements and Performance Criteria

Perform trials for testing packaging material

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

- PC1.** ensure that workarea is clean and safe before starting the trials
- PC2.** conduct lab trials of packaging material to check its suitability and verify that it is meeting the organizational requirements
- PC3.**
 - perform physical and chemical testing of packaging material
 - Physical testing: compression test, tensile test, drop test, heat seal integrity, etc.
 - Chemical testing: pH, alkalinity, compatibility test, etc.
- PC4.** monitor the testing equipment throughout the process to detect any non-conformity in the
- PC5.** develop packaging material of different designs to match the product integrity
- PC6.** liaise with operators and other departments to ensure packaging process is effective and efficient
- PC7.** coordinate with the SCM team to check gross margin of new proposed packing material and art work team (if available in company) for proposed change in artwork

Ensure packaging material meets regulatory standards

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

- PC8.** set procedure to identify, rectify and report non-complaint packaging material
- PC9.** establish a procedure to accept or reject packaging material
- PC10.** perform accelerated shelf life study of packaging material to check its suitability with the food
- PC11.** ensure the aesthetic appeal of the product is maintained in the packaging material chosen
- PC12.**
 - check the packaging requirements from the FSSAI guidelines for specific products to meet the legal requirements
 - Specific products: Milk and milk products, edible oil/fat, fruits and vegetables, canned meat, drinking water, etc.
- PC13.**
 - ensure that list of ingredients is mentioned on the label as per the sequence set by FSSAI
 - Sequence: names in descending order of composition by weight/volume, title, specific names used for ingredients, etc.
- PC14.** comply with the Legal Metrology Act, 2009 to ensure standard weights and measures requirements for different products are met

Post-trial activities

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

- PC15.** • document and prepare record at different stages of packaging development process
• Stages: Packaging material specifications, vendor sign off, transit trials, packaging material trials, etc.
- PC16.** dispose off the waste generated during trials by following organizational guidelines and environmental norms
- PC17.** shut down all the equipment safely as per standard operating practices after completion
- PC18.** clean and store the test equipment according to the standard procedure of the organization after completion of work

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organizational rules, regulations and standards to be followed for packaging materials
- KU2.** health, safety and hygiene standards to be followed in the entire process
- KU3.** characteristics of different packaging material
- KU4.** suitability of packaging material with different food products
- KU5.** defects in packaging material
- KU6.** functioning of packaging equipment
- KU7.** cross department functioning
- KU8.** importance of labelling and information to be mentioned on the product labels
- KU9.** requirements of Legal Metrology Act
- KU10.** packaging and labelling guidelines set up by FSSAI
- KU11.** methods of doing accelerated shelf life study
- KU12.** methods of safe disposal of waste and other contaminants
- KU13.** cleaning and storing procedures

Generic Skills (GS)

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

- GS1.** write common words/signs and set phrases used in the work
- GS2.** read and interpret the information accurately
- GS3.** observe the process and take suitable actions wherever necessary
- GS4.** read and interpret process manuals for using different equipment for packaging
- GS5.** manage problems and decisions using strong critical thinking
- GS6.** discuss task list, schedule and activities with team effectively
- GS7.** design and develop packaging solutions as per product requirements
- GS8.** use, repair and maintain machines and tools
- GS9.** use reasoning skills to identify and resolve day-to-day issues

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform trials for testing packaging material</i>	17	26	-	11
PC1. ensure that workarea is clean and safe before starting the trials	-	-	-	-
PC2. conduct lab trials of packaging material to check its suitability and verify that it is meeting the organizational requirements	-	-	-	-
PC3. <ul style="list-style-type: none"> • perform physical and chemical testing of packaging material • Physical testing: compression test, tensile test, drop test, heat seal integrity, etc. • Chemical testing: pH, alkalinity, compatibility test, etc. 	-	-	-	-
PC4. monitor the testing equipment throughout the process to detect any non-conformity in the	-	-	-	-
PC5. develop packaging material of different designs to match the product integrity	-	-	-	-
PC6. liaise with operators and other departments to ensure packaging process is effective and efficient	-	-	-	-
PC7. coordinate with the SCM team to check gross margin of new proposed packing material and art work team (if available in company) for proposed change in artwork	-	-	-	-
<i>Ensure packaging material meets regulatory standards</i>	9	16	-	7
PC8. set procedure to identify, rectify and report non-complaint packaging material	-	-	-	-
PC9. establish a procedure to accept or reject packaging material	-	-	-	-
PC10. perform accelerated shelf life study of packaging material to check its suitability with the food	-	-	-	-
PC11. ensure the aesthetic appeal of the product is maintained in the packaging material chosen	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. <ul style="list-style-type: none"> check the packaging requirements from the FSSAI guidelines for specific products to meet the legal requirements Specific products: Milk and milk products, edible oil/fat, fruits and vegetables, canned meat, drinking water, etc. 	-	-	-	-
PC13. <ul style="list-style-type: none"> ensure that list of ingredients is mentioned on the label as per the sequence set by FSSAI Sequence: names in descending order of composition by weight/volume, title, specific names used for ingredients, etc. 	-	-	-	-
PC14. comply with the Legal Metrology Act, 2009 to ensure standard weights and measures requirements for different products are met	-	-	-	-
<i>Post-trial activities</i>	4	8	-	2
PC15. <ul style="list-style-type: none"> document and prepare record at different stages of packaging development process Stages: Packaging material specifications, vendor sign off, transit trials, packaging material trials, etc. 	-	-	-	-
PC16. dispose off the waste generated during trials by following organizational guidelines and environmental norms	-	-	-	-
PC17. shut down all the equipment safely as per standard operating practices after completion	-	-	-	-
PC18. clean and store the test equipment according to the standard procedure of the organization after completion of work	-	-	-	-
NOS Total	30	50	-	20

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9304
NOS Name	Perform tasks for testing packaging material
Sector	Food Processing
Sub-Sector	Generic
Occupation	Research and Development
NSQF Level	5
Credits	TBD
Version	1.0
Next Review Date	NA

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
<i>Ensure food safety at the workplace</i>	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	-	-	-	-
PC7. take appropriate action in instances such as VACCP (Vulnerability Assessment Critical Control Points) and TACCP (Threat Assessment Critical Control Points)	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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
NSQ 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
<i>Follow preventive measures to avoid accidents</i>	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.	-	-	-	-
<i>Deal with emergencies</i>	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.	-	-	-	-
<i>Manage infection control</i>	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
NSQ 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
<i>Communicate effectively</i>	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	-	-
<i>Work in a team effectively</i>	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	-	-
<i>Respect diversity</i>	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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Material conservation practices</i>	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	-	-
<i>Energy/electricity conservation practices</i>	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	-	-
<i>Effective waste management/recycling practices</i>	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	-	-
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

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 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 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/N9303.Prepare for developing packaging material	30	50	-	20	100	25
FIC/N9304.Perform tasks for testing packaging material	30	50	-	20	100	35
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	-	-	39	10
Total	155	305	-	40	500	100

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
FSSAI	Food Safety and Standards Authority of India
GMP	Good Manufacturing Practices
HACCP	Hazard Analysis Critical Control Point

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	<p>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.</p>
Technical Knowledge	<p>Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.</p>
Core Skills/ Generic Skills (GS)	<p>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.</p>
Electives	<p>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.</p>
Options	<p>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.</p>