

Qualification Pack



Fruits and Vegetables Selection In-Charge

QP Code: FIC/Q0108

Version: 3.0

NSQF Level: 3

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FIC/Q0108: Fruits and Vegetables Selection In-Charge

Brief Job Description

A Fruits and Vegetables Selection In-charge is responsible for sorting and grading agricultural produce such as fruits, vegetables, nuts, etc. based on their physical and sensory characteristics

Personal Attributes

A Fruits and Vegetables Selection In-charge must have the ability to plan, organize, prioritize, tasks at the workplace. The Individual must possess reading, writing, computing and communication skills. The individual must also have good sensory observation and eyesight to identify the problems

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [FIC/N0129: Sort and grade produce](#)
2. [FIC/N9026: Prepare for production](#)
3. [FIC/N9902: Work effectively in an organisation](#)
4. [SGJ/N1702: Optimize resource utilization at workplace](#)
5. [FIC/N9901: Implement health and safety practices at the workplace](#)

Qualification Pack (QP) Parameters

Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Sorting and Grading
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2004/NIL

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Minimum Educational Qualification & Experience	8th Class OR 5th Class with 3 Years of experience relevant experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	1. Food (grading) standards for various produce 2. Food handling, packaging and storage techniques 3. Waste management 4. Operation and maintenance of various sorting and grading machineries and equipments 5. GMP 6. HACCP 7. QMS 8. Computer basics and ERP system followed by the organization 9. Training in Food Safety Standards and Regulations (as per FSSAI) (Mandatory)
Minimum Job Entry Age	18 Years
Last Reviewed On	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Approval Date	30/09/2021
Version	3.0
Reference code on NQR	2021/FI/FICSI/04518
NQR Version	1

Remarks:

Nil

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FIC/N0129: Sort and grade produce

Description

This NOS unit is about sorting and grading of various agricultural produce manually and using various machineries.

Scope

The scope covers the following :

- Wash and dry the produce
- Sort and grade the produce
- Package produce
- Transport and storage

Elements and Performance Criteria

Wash and dry the produce

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

- PC1.** receive agricultural produce from internal warehouse/cold storage
- PC2.**
 - check the quality by evaluating the physical and sensory parameters
 - Physical parameters: shape, size, weight, volume, surface area, density, porosity, appearance, colour, taste, smell, texture, maturity, specific gravity, foreign material contamination, pest infestation, etc.
- PC3.** set controls for float tank/water tank and pump the water level for washing produce
- PC4.** add specified quantity of chlorine in the water tank to kill parasites, bacteria, and viruses as per organization standards
- PC5.** set controls such as speed and height of conveyor to lift the agricultural produce from the covered floor, racks or containers
- PC6.**
 - dump the produce in the float tank/water tank for the removal of impurities
 - Impurities: soil, pesticides, dirt, plant debris and rotting parts
- PC7.** adjust the pressure of the spraying system to for removal of chlorine from the surface of fruits and vegetables
- PC8.**
 - set controls for drying line conveyor and allow washed fruits and vegetables to pass through the drying tunnel
 - Controls: temperature, air speed etc.
- PC9.**
 - set controls of the brushing conveyor to clean produce which is unsuitable for water treatment
 - Controls: speed, brush type, rotation of brushes etc.
- PC10.** transfer the fruits and/or vegetables to the brushing conveyor to remove soil and dirt from the surface of the produce
- PC11.**
 - set controls of the dryer to dry the produce thoroughly
 - controls: temperature, humidity, etc.
- PC12.** apply waxing treatment depending on the type of produce to reduce water loss and improve appearance

Sort and grade produce

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

- PC13.** move the produce to the sorting table to remove the severely damaged produce
- PC14.** place the mesh inside the mechanical sieving machine as per produce requirements to separate the unwanted material from the produce
- PC15.** remove dry foliage attached to the bulb of onion and garlic with illige or sickle and place the produce on measurement rings of known diameter to sort them on the basis of their size
- PC16.** calibrate the electronic colour sorter and mention the readings against each produce for sorting it based on their colour
- PC17.** operate the grading line conveyors with mesh screens/diverging belts/rollers/weight sensitive trays for grading based on diameter ,length, weight and size as per the requirement
- PC18.**
 - send the samples to quality lab for analysis of quality parameters as per the requirement
 - Quality parameters: TSS, acidity, etc.
- PC19.** place baskets, tubs, or crates below discharge outlets of each lane or machine to collect the sorted and graded fruits and/or vegetables
- PC20.** report any malfunctions and discrepancies to the supervisor and implement the corrective action as suggested immediately

Package and transport produce

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

- PC21.** move the containers with sorted and graded produce to the packaging area safely
- PC22.** feed the produce into the hopper of automatic packing machine after sorting and grading
- PC23.** load the packaging materials in the machine and set control of packaging machine for packing the produce
- PC24.**
 - store and pack the produce after sorting and grading into appropriate materials
 - Materials : cartons , gunny bags, wraps, net, mesh, plastic molded trays, thermoformed PVC trays etc.
- PC25.**
 - provide labelling information packaging label as per FSSAI guidelines and pass though the shrink wrap machine to wrap with shrinkable plastic films
 - Labelling information: product name, brand, size, grade, variety, net weight, count, grown by, packed by, , batch code, date of packing, best before date or used by date, allergen declaration, storage conditions and country of origin etc.
- PC26.** perform secondary packaging as per the product requirement
- PC27.** place protective material such as paper, straw, etc. in carton, place packed trays in the carton and seal, strap carton if required and weigh the packed cartons
- PC28.** place cartons on the pallets safely to shrink wrap palletized cartons for bulk packaging
- PC29.** move the packed cartons/ pallets to storage area and store them as per standard organization practices
- PC30.** follow standard practices to dispatch the packed produce to final destination as per suitable transportation method

Storage and post production cleaning and regular maintenance of equipment

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

- PC31.** clean and disinfect the work area, machineries, equipment and tools using recommended cleaning agents
- PC32.** attend minor repairs/faults of all machines (if any)
- PC33.** ensure periodic maintenance of all machines and equipment following the organisational SOP and instructions as mentioned in manufacturer documents

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Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organization standards, process standards and procedures followed in the job
- KU2.** internal processes like procurement, store management, inventory management, quality management and key contact points for query resolution
- KU3.** roles and responsibilities in the job
- KU4.** types of products produced by the organisation
- KU5.** types of raw materials (various fruits and vegetables), variety and quality of produce and their characteristics
- KU6.** washing process and various chemicals used for washing produce
- KU7.** types of machineries used and their safe handling practices
- KU8.** maintenance of machinery used in the process
- KU9.** types of rejects for each produce and methods to identify rejects
- KU10.** procedure followed to handle rejection materials
- KU11.** food standards to be followed for handling the agricultural produce
- KU12.** quality parameters, basic food microbiology and quality assessment based on physical parameters
- KU13.** physical and sensory characteristics of agricultural produce
- KU14.** different grades of agricultural produce
- KU15.** process of dilution and concentration of chlorine water
- KU16.** how to operate and control conveyor belt, brushing conveyor, grading line
- KU17.** optimum use of high-pressure spray system, dryer
- KU18.** how to carry out waxing of fruits and vegetables
- KU19.** parameters to be inspected during sorting and grading of agricultural produce
- KU20.** calibration of electronic colour sorter
- KU21.** randomized and systematic sampling of produce
- KU22.** importance of labelling the package with required details
- KU23.** different types of packaging material used for packing fresh produce
- KU24.** controls and operations of packaging machine
- KU25.** different types of packaging such as primary and secondary
- KU26.** how to organise pallets in storehouse and methods to organize pallets
- KU27.** food safety and hygiene standards to be followed in the work process
- KU28.** types and category of packaging materials, packaging machineries
- KU29.** storage procedures for incoming produce, packaging materials and packed produce
- KU30.** types of sanitizers and disinfectants and its handling and storing methods
- KU31.** cleaning practices (such as CIP and COP methods) and cleaning agents and disinfectants used in the process and their concentrations
- KU32.** basic calculations performed in the job
- KU33.** food laws and regulations on product, packaging and labelling

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- KU34.** elements of Good Manufacturing Practices (GMP) and Good Hygiene Practices (GHP) to be followed
- KU35.** importance of ensuring a tidy workplace

Generic Skills (GS)

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

- GS1.** interpret and analyse the information communicated by the supervisor, process flowcharts, equipment manuals, etc.
- GS2.** record the readings of the process parameters and provide necessary information to fill the process chart
- GS3.** note down observations (if any) related to the process and estimate the yield
- GS4.** write information documents to internal departments/ internal teams
- GS5.** discuss task lists, schedules and activities with the supervisor
- GS6.** communicate with the team effectively and reciprocate understanding
- GS7.** plan and prioritise tasks effectively
- GS8.** use common sense and make judgments on day-to-day basis
- GS9.** use reasoning skills to identify and resolve basic problems
- GS10.** use acquired knowledge of the process for identifying and handling issues

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Wash and dry the produce</i>	15.5	20.5	-	-
PC1. receive agricultural produce from internal warehouse/cold storage	1.5	1.5	-	-
PC2. <ul style="list-style-type: none"> check the quality by evaluating the physical and sensory parameters Physical parameters: shape, size, weight, volume, surface area, density, porosity, appearance, colour, taste, smell, texture, maturity, specific gravity, foreign material contamination, pest infestation, etc. 	0.5	0.5	-	-
PC3. set controls for float tank/water tank and pump the water level for washing produce	0.5	0.5	-	-
PC4. add specified quantity of chlorine in the water tank to kill parasites, bacteria, and viruses as per organization standards	1	1	-	-
PC5. set controls such as speed and height of conveyor to lift the agricultural produce from the covered floor, racks or containers	0.5	0.5	-	-
PC6. <ul style="list-style-type: none"> dump the produce in the float tank/water tank for the removal of impurities Impurities: soil, pesticides, dirt, plant debris and rotting parts 	1	2	-	-
PC7. adjust the pressure of the spraying system to for removal of chlorine from the surface of fruits and vegetables	3.5	5.5	-	-
PC8. <ul style="list-style-type: none"> set controls for drying line conveyor and allow washed fruits and vegetables to pass through the drying tunnel Controls: temperature, air speed etc. 	2	3	-	-
PC9. <ul style="list-style-type: none"> set controls of the brushing conveyor to clean produce which is unsuitable for water treatment Controls: speed, brush type, rotation of brushes etc. 	2	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. transfer the fruits and/or vegetables to the brushing conveyor to remove soil and dirt from the surface of the produce	1	2	-	-
PC11. <ul style="list-style-type: none"> • set controls of the dryer to dry the produce thoroughly • controls: temperature, humidity, etc. 	1	1	-	-
PC12. apply waxing treatment depending on the type of produce to reduce water loss and improve appearance	1	1	-	-
<i>Sort and grade produce</i>	9.5	20.5	-	-
PC13. move the produce to the sorting table to remove the severely damaged produce	1	3	-	-
PC14. place the mesh inside the mechanical sieving machine as per produce requirements to separate the unwanted material from the produce	1	3	-	-
PC15. remove dry foliage attached to the bulb of onion and garlic with illige or sickle and place the produce on measurement rings of known diameter to sort them on the basis of their size	1	2	-	-
PC16. calibrate the electronic colour sorter and mention the readings against each produce for sorting it based on their colour	1	2	-	-
PC17. operate the grading line conveyors with mesh screens/diverging belts/rollers/weight sensitive trays for grading based on diameter ,length, weight and size as per the requirement	1.5	1.5	-	-
PC18. <ul style="list-style-type: none"> • send the samples to quality lab for analysis of quality parameters as per the requirement • Quality parameters: TSS, acidity, etc. 	1	3	-	-
PC19. place baskets, tubs, or crates below discharge outlets of each lane or machine to collect the sorted and graded fruits and/or vegetables	1	3	-	-
PC20. report any malfunctions and discrepancies to the supervisor and implement the corrective action as suggested immediately	2	3	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Package and transport produce</i>	10.5	21.5	-	-
PC21. move the containers with sorted and graded produce to the packaging area safely	0.5	0.5	-	-
PC22. feed the produce into the hopper of automatic packing machine after sorting and grading	1	3	-	-
PC23. load the packaging materials in the machine and set control of packaging machine for packing the produce	1	2	-	-
PC24. <ul style="list-style-type: none"> store and pack the produce after sorting and grading into appropriate materials Materials : cartons , gunny bags, wraps, net, mesh, plastic molded trays, thermoformed PVC trays etc. 	1	2	-	-
PC25. <ul style="list-style-type: none"> provide labelling information packaging label as per FSSAI guidelines and pass through the shrink wrap machine to wrap with shrinkable plastic films Labelling information: product name, brand, size, grade, variety, net weight, count, grown by, packed by, , batch code, date of packing, best before date or used by date, allergen declaration, storage conditions and country of origin etc. 	1	3	-	-
PC26. perform secondary packaging as per the product requirement	1	3	-	-
PC27. place protective material such as paper, straw, etc. in carton, place packed trays in the carton and seal, strap carton if required and weigh the packed cartons	1	3	-	-
PC28. place cartons on the pallets safely to shrink wrap palletized cartons for bulk packaging	1	1	-	-
PC29. move the packed cartons/ pallets to storage area and store them as per standard organization practices	1	2	-	-
PC30. follow standard practices to dispatch the packed produce to final destination as per suitable transportation method	2	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Storage and post production cleaning and regular maintenance of equipment</i>	3.5	6.5	-	-
PC31. clean and disinfect the work area, machineries, equipment and tools using recommended cleaning agents	1	3	-	-
PC32. attend minor repairs/faults of all machines (if any)	1	3	-	-
PC33. ensure periodic maintenance of all machines and equipment following the organisational SOP and instructions as mentioned in manufacturer documents	1.5	0.5	-	-
NOS Total	39	69	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N0129
NOS Name	Sort and grade produce
Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Sorting and Grading
NSQF Level	3
Credits	TBD
Version	2.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

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FIC/N9026: Prepare for production

Description

This NOS unit is about performing various tasks prior to production in the food processing industry.

Scope

The scope covers the following :

- Plan for production
- Clean and maintain work area, machineries, and tools for production
- Organize for production

Elements and Performance Criteria

Plan for production

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

- PC1.** identify work requirements by obtaining instructions from the supervisor. Instructions: process chart, product flow chart, formulation, chart, etc.
- PC2.** plan and prioritize tasks as per work schedule. Tasks: inspect, clean, maintain, verify, etc.
- PC3.** estimate manpower and material requirements as per work requirement. Material: raw materials and packaging materials
- PC4.** ensure required quantity of raw materials, packaging materials, equipment, and manpower for production
- PC5.** plan capacity utilization of machinery with respect to the processing time, production order, and batch size for each product

Clean and maintain work area, machineries, and tools for production

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

- PC6.** clean and maintain the work area as per organizational procedures
- PC7.** clean and maintain the machines and tools and sanitize them as per the organization's specifications and standards
- PC8.** dispose of the waste material at designated place safely. Waste material: hazardous waste, food waste, packaging waste, etc.
- PC9.** inspect the tools, equipment, and machinery to ascertain suitability for use
- PC10.** report information such as faulty tools and equipment to the concerned authority

Organize for production

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

- PC11.** organize tools and equipment
- PC12.** receive and organize production materials appropriately. Production materials: raw materials, packaging materials, etc.
- PC13.** allot responsibilities/work to the assistants and helpers

Knowledge and Understanding (KU)

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The individual on the job needs to know and understand:

- KU1.** production planning process
- KU2.** analysis and interpretation of various process charts, product flow charts, etc.
- KU3.** resource management process
- KU4.** procedure to estimate manpower and raw material
- KU5.** capacity utilization calculation
- KU6.** organizational policies and SOP on cleanliness
- KU7.** operating procedure and general maintenance of food production machineries
- KU8.** waste management procedures
- KU9.** methods to inspect tools, equipment and machinery
- KU10.** procedure to allot work or responsibility to the team

Generic Skills (GS)

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

- GS1.** read and interpret organizational policies, SOP, production charts, etc.
- GS2.** communicate effectively with subordinates as well as supervisors
- GS3.** plan and prioritize various tasks
- GS4.** be always punctual and courteous
- GS5.** organize all process/equipment manuals to access information easily
- GS6.** discuss task lists, schedules, and activities with the senior/supervisor

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan for production</i>	11	25	-	-
PC1. identify work requirements by obtaining instructions from the supervisor. Instructions: process chart, product flow chart, formulation, chart, etc.	3	6	-	-
PC2. plan and prioritize tasks as per work schedule. Tasks: inspect, clean, maintain, verify, etc.	2	5	-	-
PC3. estimate manpower and material requirements as per work requirement. Material: raw materials and packaging materials	2	4	-	-
PC4. ensure required quantity of raw materials, packaging materials, equipment, and manpower for production	2	5	-	-
PC5. plan capacity utilization of machinery with respect to the processing time, production order, and batch size for each product	2	5	-	-
<i>Clean and maintain work area, machineries, and tools for production</i>	14	32	-	-
PC6. clean and maintain the work area as per organizational procedures	3	7	-	-
PC7. clean and maintain the machines and tools and sanitize them as per the organization's specifications and standards	3	7	-	-
PC8. dispose of the waste material at designated place safely. Waste material: hazardous waste, food waste, packaging waste, etc.	3	7	-	-
PC9. inspect the tools, equipment, and machinery to ascertain suitability for use	3	6	-	-
PC10. report information such as faulty tools and equipment to the concerned authority	2	5	-	-
<i>Organize for production</i>	5	13	-	-
PC11. organize tools and equipment	2	7	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. receive and organize production materials appropriately. Production materials: raw materials, packaging materials, etc.	2	4	-	-
PC13. allot responsibilities/work to the assistants and helpers	1	2	-	-
NOS Total	30	70	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9026
NOS Name	Prepare for production
Sector	Food Processing
Sub-Sector	Generic
Occupation	Production
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

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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

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- 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

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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	-	-

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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	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQF Clearance Date	30/09/2021

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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:

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- 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

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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	-	-



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

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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	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

Qualification Pack

FIC/N9901: Implement health and safety practices at the workplace

Description

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

Scope

The scope covers the following :

- Ensure food safety and personal hygiene
- Follow safety measures to avoid accidents
- Follow emergency procedures
- Manage infection control

Elements and Performance Criteria

Ensure food safety and personal hygiene

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

- PC1.** follow relevant practices to avoid cross contamination at all stages of food processing operations
- PC2.** follow organisational procedures for handling items that may cause allergic reactions
- PC3.** follow Good Manufacturing Practices (GMP) at the workplace. Good Manufacturing Practices: 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 (Source: Schedule IV, FSSAI Licensing and Registration, 2011)
- PC4.** follow Good Hygiene Practices (GHP) at the workplace appropriately. Good Hygiene Practices: use of gloves, hairnets, masks, ear plugs, goggles, shoes etc; washing hands regularly; treating injuries such as cuts, boils, skin infections and grazes; preventive health check-ups ; getting vaccinated whenever required. (Source: Schedule IV, FSSAI Licensing and Registration, 2011)

Follow safety measures to avoid accidents

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

- PC5.** use protective clothing/equipment for specific tasks and work conditions
- PC6.** identify job-site hazardous work and possible causes of risk or accident at the workplace
- PC7.** deal with hazards safely and appropriately to ensure safety of self and others as per organisational protocol
- PC8.** use various types of fire extinguishers effectively
- PC9.** respond promptly and appropriately to an accident situation or medical emergency
- PC10.** provide cardio-pulmonary resuscitation (CPR) as per the requirement (e.g. cardiac arrest)

Follow emergency procedures

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

- PC11.** follow workplace emergency and evacuation procedures
- PC12.** use safe methods to free a person from electrocution

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PC13. administer appropriate first aid to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning etc.

Manage infection control

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

PC14. use appropriate disinfectants to disinfect the work area and equipment as per organisational protocol

PC15. ensure personal hygiene by washing hands regularly using alcohol based sanitisers and wearing personal protective equipment (PPE)

PC16. report illness of self and others to the supervisor or concerned authority

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. meaning of hazards and risks

KU2. possible causes of risk, hazard or accident in the workplace

KU3. where to find all the general health and safety equipment in the workplace

KU4. health and safety policy and procedures of the organization

KU5. health and safety hazards commonly present in the work environment

KU6. work practices and precautions used to control and prevent risks, hazards and accidents

KU7. applicable standards and regulations as listed in The Food Safety and Standards Act, 2006

KU8. importance of each personal protective equipment used such as eye protection, hard hats, gloves apron, rubber boots, etc.

KU9. importance of ensuring personal hygiene at the workplace

KU10. ways to prevent cross contamination at the workplace

KU11. importance of storing food at specified temperatures

KU12. various dangers associated with the use of electrical and other equipment

KU13. preventive and remedial actions to be taken in the case of exposure to toxic materials

KU14. various causes of fire and the ways to prevent them

KU15. techniques of using the different fire extinguishers

KU16. procedure followed for providing cardio-pulmonary resuscitation (CPR) to the affected

KU17. rescue techniques applied during a fire hazard

KU18. various types of safety signs and what they mean

KU19. workplace emergency and evacuation procedures

KU20. appropriate basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries

KU21. potential injuries and ill health conditions associated with incorrect manual handling

KU22. safe lifting and carrying practices

KU23. safe practices to be followed for ensuring sanitisation of self and work area

KU24. procedure for storing the sanitising materials appropriately

Generic Skills (GS)

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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, symbols and product manuals
- GS3.** communicate with coworkers appropriately in order to clarify instructions and other issues
- GS4.** make appropriate decisions pertaining to the concerned area of work regarding the work objective, span of authority, responsibility, laid down procedure and guidelines
- GS5.** plan and organize the work schedule, work area, tools, equipment and materials for improved productivity
- GS6.** identify probable solutions to the problems in hand and evaluate them
- GS7.** seek official and authorised sources of help and guidance to resolve problems that cannot be solved at one's level of authority

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure food safety and personal hygiene</i>	7	19	-	-
PC1. follow relevant practices to avoid cross contamination at all stages of food processing operations	1	4	-	-
PC2. follow organisational procedures for handling items that may cause allergic reactions	1	4	-	-
PC3. follow Good Manufacturing Practices (GMP) at the workplace. Good Manufacturing Practices: 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 (Source: Schedule IV, FSSAI Licensing and Registration, 2011)	3	7	-	-
PC4. follow Good Hygiene Practices (GHP) at the workplace appropriately. Good Hygiene Practices: use of gloves, hairnets, masks, ear plugs, goggles, shoes etc; washing hands regularly; treating injuries such as cuts, boils, skin infections and grazes; preventive health check-ups ; getting vaccinated whenever required. (Source: Schedule IV, FSSAI Licensing and Registration, 2011)	2	4	-	-
<i>Follow safety measures to avoid accidents</i>	11	24	-	-
PC5. use protective clothing/equipment for specific tasks and work conditions	2	4	-	-
PC6. identify job-site hazardous work and possible causes of risk or accident at the workplace	2	4	-	-
PC7. deal with hazards safely and appropriately to ensure safety of self and others as per organisational protocol	2	4	-	-
PC8. use various types of fire extinguishers effectively	2	4	-	-
PC9. respond promptly and appropriately to an accident situation or medical emergency	1	4	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. provide cardio-pulmonary resuscitation (CPR) as per the requirement (e.g. cardiac arrest)	2	4	-	-
<i>Follow emergency procedures</i>	6	12	-	-
PC11. follow workplace emergency and evacuation procedures	2	4	-	-
PC12. use safe methods to free a person from electrocution	2	4	-	-
PC13. administer appropriate first aid to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning etc.	2	4	-	-
<i>Manage infection control</i>	6	15	-	-
PC14. use appropriate disinfectants to disinfect the work area and equipment as per organisational protocol	3	7	-	-
PC15. ensure personal hygiene by washing hands regularly using alcohol based sanitisers and wearing personal protective equipment (PPE)	1	4	-	-
PC16. report illness of self and others to the supervisor or concerned authority	2	4	-	-
NOS Total	30	70	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9901
NOS Name	Implement health and safety practices at the workplace
Sector	Food Processing
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ 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 Element/ 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 these criteria.
6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

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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/N0129.Sort and grade produce	39	69	-	-	108	20
FIC/N9026.Prepare for production	30	70	-	-	100	25
FIC/N9902.Work effectively in an organisation	22	39	-	-	61	25
SGJ/N1702.Optimize resource utilization at workplace	13	26	-	-	39	15
FIC/N9901.Implement health and safety practices at the workplace	30	70	-	-	100	15
Total	134	274	-	-	408	100

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Qualification Pack

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.

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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.