



Assistant Lab Technician - Food and Agricultural Commodities

QP Code: FIC/Q7601

Version: 3.0

NSQF Level: 3

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

Qualification Pack

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FIC/Q7601: Assistant Lab Technician - Food and Agricultural Commodities

Brief Job Description

An Assistant Lab Technician - Food and Agricultural Commodities is responsible for ensuring quality products through sampling of raw materials, packaging materials, finished products, and shelf-life samples for quantitative and qualitative analysis. They are also responsible for maintaining the inventory and upkeep of the resources and documentation of the entire process. They should be familiar with operating the instruments and also troubleshoot and repair the minor issues that arise while working with these instruments.

Personal Attributes

An Assistant Lab Technician - Food and Agricultural Commodities must have the ability to plan, organize and prioritize. The individual must possess reading, writing and communication skills. In addition, the individual must have personal and professional hygiene. S/he must have an understanding of food safety standards and requirements.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [FIC/N7627: Prepare the lab for testing samples](#)
2. [FIC/N7603: Perform Basic Sampling and Perform day-to-day lab activities](#)
3. [FIC/N9907: Apply food safety and Maintain hygiene in the laboratory](#)
4. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

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Qualification Pack (QP) Parameters

Sector	Food Processing
Sub-Sector	Multi-Sectorial
Occupation	Quality Analysis/ Assurance
Country	India
NSQF Level	3
Credits	11
Aligned to NCO/ISCO/ISIC Code	NCO-2004/3116.20
Minimum Educational Qualification & Experience	<ul style="list-style-type: none"> • 10th Grade pass & Equivalent OR • 8th Grade pass with 3 years of relevant experience in the food Industry/ Lab OR • Previous relevant Qualification of NSQF Level 2.5 with 1.5 years experience in Food Industry/Food Lab OR • Previous relevant Qualification of NSQF Level 2 with 3 years experience in Food Industry/Food Lab
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	27/08/2024
Next Review Date	26/08/2027
NSQC Approval Date	27/08/2024
Version	3.0

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FIC/N7627: Prepare the Lab for testing samples

Description

This NOS is about preparing the facility for testing the sample food products

Scope

The scope covers the following :

- Organize lab to carry out testing of sample
- Receive/handle the samples for testing
- Carry out visual inspection of samples

Elements and Performance Criteria

Organize lab to carry out testing of samples

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

- PC1 maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, pests, and flies.
- PC2 Clean and sterilize the testing equipment with an approved cleaning agent, following SOP guidelines.
- PC3 verify the working and performance of all sampling devices and other equipment used in the lab as per the standard operating procedure
- PC4 maintain glassware by cleaning, washing, sterilizing, and distributing.
- PC5 monitor the temperatures of freezers and refrigerators.
- PC6 clean Nitrogen Evaporator, water bath, refrigerators, and foreheads.
- PC7 adhere to procedures for sample return, disposal, and archiving.
- PC8 keep laboratory supplies ready by inventorying stock, placing orders, and verifying receipts
- PC9 adhere to safety guidelines at all times within the laboratory.
- PC10 keeps equipment operating by following operating instructions; troubleshooting breakdowns; maintaining supplies; performing preventive maintenance; calling for repairs
- PC11 attend to minor repairs/ faults of machineries if required.

Receive samples for testing

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

- PC12 verify the adequacy and condition of the sample received, it should conform to the standards set by the lab.
- PC13 Identify the products and examine the sample
 - a. identity: plant-based food, animal-based food, state of maturity, use before date, etc.
- PC14 check the sample received is sealed tightly and that there is no leakage
- PC15 verify the sample containers for gross physical defects
- PC16 verify the product label has important details related to the sample
- PC17 verify the additive details are present with their quantity
- PC18 Verify that the sample has all the collection details
 - b. details: sample number, collecting official's name and date, sampling point(address), batch number,

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transport conditions (mode and condition of transport), date of submission to the lab, etc.

PC19 maintain all quality parameters as per QC norms

PC20 verify the chain of custody of the sample(s) and maintain the required storage parameters for the sample.

PC21 document the product's condition at the time of receiving as per the format maintained by the organization

Carry out visual inspection of received samples

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

PC22 Verify the physical conditions of the product received for testing

a. Physical condition: solid, liquid, semi-solid, frozen

PC23 verify the product is free from any contaminants

b. Contaminants: fungus, pests, etc

PC24 raise concerns about the samples to the analyst

PC25 deliver samples to the laboratory for testing with the original condition of the samples

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. different equipment and tools used while preparing samples for food testing

KU2. approved sanitizers and cleaning agents used for cleaning the work area and tools

KU3. calibration techniques used for different equipment

KU4. procedure of receiving samples

KU5. details to be checked while accepting samples and noted down

KU6. techniques used to check the quality of containers, pouches, and other packaging materials used in samples

KU7. how to identify the type of product that needs to be tested

KU8. visual inspection of food samples

KU9. different aspects to inspect the product samples

KU10. Importance of details on the label e.g. Ingredients used, nutritional value, details of additives used and quantity, etc,

KU11. scientific methods of analysis and SOPs of equipment

KU12. periodic maintenance and cleaning protocol of the instruments

KU13. lab and personal safety protocols

KU14. troubleshoot minor issues with equipment that arise during operation

KU15. sample preparation post storage like thawing, homogenizing, conditioning, etc

KU16. basic microbiology

KU17. basic understanding of standards like ISO 17020, ISO 17025, and ISO 17065

KU18. basic understanding of statistics

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Generic Skills (GS)

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

- GS1. read and interpret organization policies and Standard Operating Procedure
- GS2. listen carefully to client and peers and pay close attention to details
- GS3. communicate with others effectively
- GS4. plan and prioritize tasks as per work requirements
- GS5. should be a good team player
- GS6. be always punctual and courteous

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Organize lab to carry out testing of samples</i>	18	14	-	10
PC1. maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, pests, and flies.	1	1	-	1
PC2. Clean the testing equipment with an approved cleaning agent following SOP guidelines.	2	1	-	1
PC3. verify the working and performance of all sampling devices and other equipment used in the lab as per the standard operating procedure	2	1	-	1
PC4. maintain glassware by cleaning, washing, sterilizing, and distributing.	2	1	-	-
PC5. monitor the temperatures of freezers and refrigerators.	2	1	-	1
PC6. clean Nitrogen Evaporator, water bath, refrigerators, and freezers.	2	1	-	1
PC7. adhere to procedures for sample return, disposal, and archiving.	2	2	-	1
PC8. keep laboratory supplies ready by inventorying stock, placing orders, and verifying receipts	1	2	-	1
PC9. adhere to safety guidelines at all times within the laboratory.	1	1	-	1
PC10. keeps equipment operating by following operating instructions; troubleshooting breakdowns; maintaining supplies; performing preventive maintenance; calling for repairs.	2	2	-	1
PC11. attend to minor repairs/ faults of machineries, if required.	1	1	-	1
<i>Receive samples for testing</i>	11	18	-	12
PC12. the adequacy and condition of the sample received, it should conform to the standards set by the lab.	1	2	-	1

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. examine the sample and identity of the product identity: plant-based food, animal-based food, state of maturity, use before date, etc.	1	2	-	1
PC14. check the sample received is sealed tightly and that there is no leakage	1	1	-	1
PC15. verify the sample containers for gross physical defects	0	1	-	1
PC16. Verify the product label has important details related to the sample	1	2	-	1
PC17. Verify the preservative details are present with their quantity	1	2	-	1
PC18. Verify that the sample has all the collection details details: sample number, collecting official's name and date, sampling point(address), batch number, transport conditions (mode and condition of transport), date of submission to the lab, etc.	1	3	-	1
PC19. maintain all quality parameters as per QC norms	2	2	-	2
PC20. verify the chain of custody of the sample(s) and maintain the required storage parameters for the sample.	1	2	-	1
PC21. document the product's condition at the time of receiving as per the format maintained by the organization	2	1	-	2
<i>Carry out visual inspection of received samples</i>	5	9	-	3
PC22. Verify the physical conditions of the product received for testing Physical condition: solid, liquid, semi-solid, frozen	2	4	-	1
PC23. Verify the product is free from any contaminants Contaminants: fungus, pests, etc	2	2	-	1
raise concerns about the samples to the supervisor	-	2	-	1
deliver samples to the laboratory for testing with the original condition of the samples	1	1	-	-
NOS Total	34	41	-	25

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7627
NOS Name	Prepare the Lab for testing samples
Sector	Food Processing
Sub-Sector	Multi-Sectorial
Occupation	Quality Analysis/ Assurance
NSQF Level	3.5
Credits	3
Version	1.0
Last Reviewed Date	23/06/2023
Next Review Date	23/06/2026
NSQC Clearance Date	23/06/2023

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FIC/N7603: Perform Basic Sampling and perform day-to-day lab activities

Description

Sampling and quality analysis as per the specifications and standards of the organization.

Elements and Performance Criteria

Sample for quality analysis (for food lab activities)

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

PC1 read and understand the sampling instructions from the food lab technician

PC2 categorize various types of materials as per the standard operating procedure (SOP)

types: perishable, semi-perishable, non-perishable, or raw or processed foods of agricultural products, foods of animal origin, dairy foods, Ready to eat foods and miscellaneous products (samples from outlets)

PC3 analyse the sample materials to ensure compliance with quality standards and specifications

PC4 document sampling activities and analysis results for traceability and quality control purposes.

PC5 collect the pre-shipment samples sent by the vendors from the purchase/supply chain department

PC6 collect samples from effluent treatment plant following procedures and standards of the organisation

PC7 collect samples received from the market such as customer/consumer complaint samples, market samples, competitor sample

PC8 label the samples with details like sample name, date and time of sampling, batch/manufacture /expiry details (as applicable)

PC9 collect all documents pertaining to incoming lab samples like copy of purchase order, invoice, certificate of analysis etc for verification and records

PC10 ensure all documents are provided by the supplier as per organisation standards

PC11 transfer the samples to food lab and place in the designated area for analysis

PC12 record the sample details in the lab register and file the supplier documents

PC13 file and maintain all documents related to sample along with the test report

PC14 transfer the production control sample and shelf life sample to the control sample/shelf-life sample room

PC15 monitor and maintain the storage conditions (like temperature, humidity, cleanliness etc) of the control sample/ shelf-life sample room

PC16 dispose the control sample and shelf-life sample after the control period following disposal procedures and as per organisation standards

procedure: step1 Segregate wastes based on properties and compatibility to prevent reactions or contamination like chemical, biological, and radioactive wastes

step 2. label the waste containers properly with type and hazards, and store them in designated areas.

type: chemical, biological, solid waste, general waste

PC17 treat and neutralize wastes before disposal as per the waste disposal standards

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- PC18 maintain the documentation for waste disposal process
- PC19 document market samples for quality standards and regulatory compliance.

Quality analysis of samples (for food lab activities)

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

- PC20 read and understand the standard operating procedures (SOP) for the analysis of each sample
- PC21 carry out analysis in calibrated equipments following standard operating procedure
- PC22 Perform a physical inspection of the food samples, checking appearance, size and shape, texture, weight, presence of foreign matter, and odor
- PC23 perform tests on packaging materials like measuring the dimensions of all packaging materials, checking the printed matter and comparing with standard, checking the strength of cartons, etc for all samples collected
- PC24 clean the glassware used with recommended detergents, disinfectants, and sanitizers
- PC25 Clean and maintain equipments used, following maintenance procedures for equipments

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1 organization standards, process standards and procedures followed in the organisation
- KU2 types of products produced by the organisation
- KU3 code of business conduct
- KU4 dress code to be followed
- KU5 job responsibilities/duties and standard operating procedures
- KU6 internal processes such as procurement, store management, inventory management, quality management and key contact points for query resolution
- KU7 provision of wages, working hours and accident compensation as per organisation policy
- KU8 food safety and hygiene standards followed
- KU9 types of adulterants used in the industry
- KU10 knowledge of residue analysis
- KU11 types of raw materials, packaging materials used and finished products processed in the organisation
- KU12 types of products produced in the organisation
- KU13 equipment/instruments used in the laboratory and its maintenance procedure
- KU14 frequency and procedure for calibration of each equipment
- KU15 types of chemicals used in the organisation laboratory
- KU16 reagents required for analysis of raw materials, packaging materials and finished products
- KU17 procedure for preparation of all reagents required for analysis of raw materials, packaging materials and finished products
- KU18 frequency for preparation of required reagent
- KU19 SOPs for equipments and analysis parameters
- KU20 Enter sample details used in production, control sample register and shelf-life sample register, in ERP
- KU21 sampling methods and procedures for raw materials, packaging materials, finished products

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- KU22 sampling procedure and sampling frequency for production/process samples, shelf-life studies samples
- KU23 basic tests on physical parameters like color, appearance, texture, weight and count on the samples collected
- KU24 chemical analysis like moisture content, bulk density, ph, total soluble solids (tss) using refractometer, etc on food and agricultural commodity samples collected
- KU25 method to verify supplier documents against organisation standards
- KU26 tests to be carried out for raw materials, packaging materials and finished products
- KU27 procedures for analysis of all quality parameters and frequency of analysis of each parameter
- KU28 procedures for storing, maintaining and disposing production control sample
- KU29 basic food microbiology
- KU30 methods and procedures for maintaining shelf-life samples and carrying out shelf-life studies
- KU31 attending and handling market complaints
- KU32 inventory management of lab supplies
- KU33 process methods for all products produced in the organisation
- KU34 machineries used in production / process
- KU35 types and category of packaging materials, packaging machineries
- KU36 storage procedures for raw materials, packaging materials and finished goods
- KU37 cleaning procedures like CIP and COP
- KU38 knowledge on sanitizers and disinfectants and its handling and storing methods
- KU39 various laboratory techniques
- KU40 food laws and regulations on product, packaging and labelling
- KU41 enter the test results in the erp system
- KU42 food safety and hygiene
- KU43 GMP
- KU44 HACCP

Generic Skills (GS)

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

- GS1.** note the information communicated by the supervisor
- GS2.** note the raw materials used for production and the finished products produced
- GS3.** note the readings of the process parameters and provide necessary information to fill the process chart
- GS4.** note down observations (if any) related to the process
- GS5.** write information documents to internal departments/ internal teams
- GS6.** note down the data for online ERP or as per applicability in the organization **GS7.** read and interpret the process required for producing various types of products **GS8.** read and interpret and process flowchart for all products produced
- GS9.** read equipment manuals and process documents to understand the equipments operation and process requirement
- GS10.** read internal information documents sent by internal teams

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- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with the team members
- GS13.** question the supervisor in order to understand the nature of the problem and to clarify queries
- GS14.** attentively listen and comprehend the information given by the speaker
- GS15.** communicate clearly with the supervisor and cross department teams on the issues faced during process
- GS16.** analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue
- GS17.** handle issues in case the supervisor is not available (as per the authority matrix defined by the organization)
- GS18.** plan and organize the work order and jobs received from the supervisor
- GS19.** organize raw materials and packaging materials required for all products following the instruction provided by the supervisor
- GS20.** plan and prioritize the work based on the instructions received from the supervisor
- GS21.** plan to utilize time and equipment's effectively
- GS22.** organize all process/ equipment manuals so as to access information easily
- GS23.** support the supervisor in scheduling tasks for helper(s)
- GS24.** understand customer requirements and their priority and respond as per their needs
- GS25.** support supervisor in solving problems by detailing out problems
- GS26.** discuss the possible solutions with the supervisor for problem solving
- GS27.** apply domain information about maintenance processes and technical knowledge about tools and equipment
- GS28.** use common sense and make judgments on day to day basis
- GS29.** use reasoning skills to identify and resolve basic problems
- GS30.** use intuition to detect any potential problems which could arise during operations
- GS31.** 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>Sample for quality analysis (for food lab activities)</i>	25	32	-	15
PC1. read and understand the sampling instructions from the food lab technician	1	2	-	0
PC2. categorize various types of materials as per the standard operating procedure(SOP) types: perishable, semi-perishable, non-perishable, or raw or processed foods of agricultural products, foods of animal origin, dairy foods, Ready to eat foods and miscellaneous products (samples from outlets)	2	2	-	1
PC3. analyse the sample materials to ensure compliance with quality standards and specifications	2	2	-	1
PC4. document sampling activities and analysis results for traceability and quality control purposes	2	2	-	1
PC5. collect the pre-shipment samples sent by the vendors from purchase/supply chain department	2	3	-	0
PC6. collect samples from effluent treatment plant following procedures and standards of the organisation	2	2	-	1
PC7. collect samples received from the market such as customer/consumer complaint samples, market samples, competitor sample	1	2	-	1
PC8. label the samples with details like sample name, date and time of sampling, batch/manufacture /expiry details (as applicable)	1	2	-	1
PC9. collect all documents pertaining to incoming lab samples like copy of purchase order, invoice, certificate of analysis etc for verification and records	1	2	-	1
PC10. ensure all documents are provided by the supplier as per organisation standards	1	1	-	1
PC11. transfer the samples to food lab and place in the designated area for analysis	1	1	-	1

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. record the sample details in the lab register and file the supplier documents	0.5	2		1
PC13. file and maintain all documents related to sample along with the test report	0.5	1.5		0
PC14. transfer the production control sample and shelf life sample to the control sample/shelf-life sample room	1	1.5		1
PC15. monitor and maintain the storage conditions (like temperature, humidity, cleanliness etc) of the control sample/ shelf-life sample room	1.5	1		0
PC16. dispose the control sample and shelf-life sample after the control period following disposal procedures and as per organisation standards procedure: step1 Segregate wastes based on properties and compatibility to prevent reactions or contamination step 2. label the waste containers properly with type and hazards, and store them in designated areas	1.5	1		1
PC17. treat and neutralize wastes before disposal as per the waste disposal standards	1	1		1
PC18. maintain the documentation for waste disposal process	1	1		0
PC19. maintain records of finished products, production, control, and shelf-life samples, as well as equipment calibrations, to support food lab activities.	2	2		1
<i>Quality analysis of samples (for food lab activities)</i>	8	14		6
PC20. read and understand the standard operating procedures (sop) for analysis of each sample	1	2	-	1
PC21. carry out analysis in calibrated equipments following standard operating procedure	2	2	-	1
PC22. perform basic tests on physical parameters like colour, appearance, texture, weight, count etc on food and agricultural commodity samples collected	2	3	-	1
PC23. perform tests on packaging materials like measuring the dimensions of all packaging materials, checking the printed matter and comparing with standard, checking the strength of cartons, etc for all samples collected	1	3	-	1

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PC24. clean the glassware used with recommended detergents, disinfectants and sanitizers	1	2	-	1
PC25. Clean and maintain equipments used, following maintenance procedures for equipments	1	2	-	1
NOS Total	33	46	-	21

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7603
NOS Name	Sampling and quality analysis for food lab activities
Sector	Food Processing
Sub-Sector	Multi-Sectorial
Occupation	Quality Analysis
NSQF Level	3
Credits	4
Version	2.0
Last Reviewed Date	27/08/2024
Next Review Date	26/08/2027
NSQC Clearance Date	27/08/2024

Qualification Pack

FIC/N9907: Apply Food Safety and Maintain hygiene in the laboratory

Description

The unit focuses on the knowledge and skills required to maintain a safe and hygienic food testing laboratory environment.

Scope

The scope covers the following:

- Apply & practices to maintain food safety and hygiene in the laboratory

Elements and Performance Criteria

Implement practices to maintain food safety and hygiene in laboratory

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

- PC1. ensure timely medical examination of foodborne illness by a medical practitioner.
- PC2. read the latest updates for food safety regulations and standards with respect to products, packaging, and labelling
- PC3. identify and control potential food safety hazards within the lab
- PC4. ensure Material Safety Data Sheet(MSDS) are readily available and accessible in the lab for all the personnel
- PC5. Categorize and store chemicals according to their compatibility and hazard class as per the MSDS
- PC6. follow proper procedures for the collection, labeling, and storage of biological samples to prevent contamination and degradation.
- PC7. segregate waste according to type (biological, chemical, sharps, general) and dispose of it in designated, labeled bins.
- PC8. implement control measures to avoid cross-contamination of food samples.
- PC9. implement Goods Hygiene Practices within the lab
- PC10. follow good storage practices as per organizational standards and maintain control parameters such as temperature and humidity
- PC11. apply Good Laboratory Practices (GLP) to ensure high-quality and reliable lab results
- PC12. implement and maintain food safety protocols
- PC13. implement practices to control food allergens and their management
- PC14. troubleshoot minor issues with equipment that arise during operation and report any major malfunctions to the Manager immediately
- PC15. participate in lab audits and ensure the mandatory record keeping and documentation

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1 Understanding of HACCP (Hazard Analysis and Critical Control Points)

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- KU2 Understand foodborne illness and their causes
- KU3 understand the latest updates for food safety regulations and standards for products, packaging, and labelling
- KU4 understand the purpose and scope of NABL accreditation and its impact on laboratory operations
- KU5 understand and comply with NABL (National Accreditation Board for Testing and Calibration Laboratories) guidelines and regulations.
- KU6 understand the importance of MSDS while categorizing and storing chemicals in the food testing labs
- KU7 understand Good Laboratory Practices (GLP) to ensure high-quality and reliable lab results
- KU8 understand the FSSAI guidelines and standards applicable to food testing laboratories.
- KU9 Familiarity with food safety regulations and standards, food packaging, and food labeling.
- KU10 Ability to identify and control potential food safety hazards
- KU11 Good hygiene and sanitation practices
- KU12 Knowledge of food packaging and storage techniques
- KU13 Knowledge of food safety protocols
- KU14 awareness about food allergens and their management techniques
- KU15 procedure to conduct food safety audits and importance of standards relevant to lab audits

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Implement practices to maintain food safety and hygiene in laboratory</i>	17	18	-	15
PC1. Ensure timely medical examination of foodborne illness by a medical practitioner.	1	1	-	1
PC2. Read the latest updates for food safety regulations and standards with respect to products, packaging, and labelling	2	1	-	1
PC3. identify and control potential food safety hazards within the lab	1	1	-	1
PC4. ensure Material Safety Data Sheet(MSDS) are readily available and accessible in the lab for all the personnel	1	1	-	1
PC5. ensure Material Safety Data Sheet(MSDS) are readily available and accessible in the lab for all the personnel	1	1	-	1
PC6. Categorize and store chemicals according to their compatibility and hazard class as per the MSDS	1	1	-	1
PC7. follow proper procedures for the collection, labeling, and storage of biological samples to prevent contamination and degradation.	1	2	-	1
PC8. implement practices to control food allergens and their management	1	1	-	1
PC9. implement Goods Hygiene Practices within the lab	1	1	-	1
PC10. follow good storage practices as per organizational standards and maintain control parameters such as temperature and humidity	1	2	-	1
PC11. apply Good Laboratory Practices (GLP) to ensure high-quality and reliable lab results	1	1	-	1
PC12. implement and maintain food safety protocols	2	2	-	1
PC13. implement practices to control food allergens and their management	1	1	-	1
PC14. troubleshoot minor issues with equipment that arise during operation and report any major malfunctions to the manager immediately	1	1	-	1
PC15. participate in lab audits and ensure the mandatory record keeping and documentation	1	1	-	1
NOS Total	17	18	-	15

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9907
NOS Name	Apply Food Safety and Hygiene in the laboratory
Sector	Food Processing
Sub-Sector	Multi-Sectorial
Occupation	Generic
NSQF Level	3.5
Credits	1
Version	2.0
Last Reviewed Date	27/08/2024
Next Review Date	26/08/2027
NSQC Clearance Date	27/08/2024

Qualification Pack

DGT/VSQ/N0101: Employability Skills (30 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

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

PC1. understand the significance of employability skills in meeting the job requirements

Constitutional values – Citizenship

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

PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

Becoming a Professional in the 21st Century

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

PC3. explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

Basic English Skills

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

PC4. speak with others using some basic English phrases or sentences

Communication Skills

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

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PC5. follow good manners while communicating with others

PC6. work with others in a team

Diversity & Inclusion

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

PC7. communicate and behave appropriately with all genders and PwD

PC8. report any issues related to sexual harassment

Financial and Legal Literacy

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

PC9. use various financial products and services safely and securely

PC10. calculate income, expenses, savings etc.

PC11. approach the concerned authorities for any exploitation as per legal rights and laws

Essential Digital Skills

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

PC12. operate digital devices and use its features and applications securely and safely

PC13. use internet and social media platforms securely and safely

Entrepreneurship

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

PC14. identify and assess opportunities for potential business

PC15. identify sources for arranging money and associated financial and legal challenges

Customer Service

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

PC16. identify different types of customers

PC17. identify customer needs and address them appropriately

PC18. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC19. create a basic biodata

PC20. search for suitable jobs and apply

PC21. identify and register apprenticeship opportunities as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use basic spoken English language

KU6. Do and dont of effective communication

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inclusivity and its importance

- KU8. different types of disabilities and appropriate communication and behaviour towards PwD
- KU9. different types of financial products and services
- KU10. how to compute income and expenses
- KU11. importance of maintaining safety and security in financial transactions
- KU12. different legal rights and laws
- KU13. how to operate digital devices and applications safely and securely
- KU14. ways to identify business opportunities
- KU15. types of customers and their needs
- KU16. how to apply for a job and prepare for an interview
- KU17. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

- GS1. communicate effectively using appropriate language
- GS2. behave politely and appropriately with all
- GS3. perform basic calculations
- GS4. solve problems effectively
- GS5. be careful and attentive at work
- GS6. use time effectively
- GS7. maintain hygiene and sanitisation to avoid infection

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
PC3. explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. calculate income, expenses, savings etc.	-	-	-	-
PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	4	6	-	-
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
PC13. use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
NOS Total	20	30	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	17/11/2022
Next Review Date	25/07/2024
NSQC Clearance Date	29/07/2021

Qualification Pack

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.
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.)

Qualification Pack

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N7627: Prepare the Lab for testing samples	34	41		25	100	35%
FIC/N7603: Perform Basic Sampling and day-to-day lab activities	33	46		21	100	35%
FIC/N9907: Apply Food Safety and Maintain Hygiene in the laboratory	17	18		15	50	20%
DGT/VSQ/N0101: Employability Skill (30 hrs)	20	30		00	50	10%
Total	104	135		61	300	100%

Qualification Pack

Acronyms

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

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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.