



Assistant Lab Technician - Food and Agricultural Commodities

QP Code: FIC/Q7601

Version: 2.0

NSQF Level: 4

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

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/N7602: Prepare for quality analysis and manage housekeeping for food lab activities](#)
2. [FIC/N7603: Sampling and quality analysis for food lab activities](#)
3. [FIC/N7604: Complete documentation and record keeping related to performing food lab activities](#)
4. [FIC/N7605: Food safety, hygiene and sanitation for food lab testing](#)
5. [FIC/N7601: Prepare and maintain work area and equipments for food lab testing](#)

Qualification Pack (QP) Parameters

Sector	Food Processing
Sub-Sector	Fruits and Vegetables, Food Grain Milling (including oilseeds), Dairy Products, Meat and Poultry, Fish and Sea Food, Bread and Bakery, Alcoholic Beverages, Aerated Water/Soft Drinks, Soya Food, Packaged Foods
Occupation	Quality Analysis/ Assurance
Country	India
NSQF Level	4

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Aligned to NCO/ISCO/ISIC Code	NCO-2004/3116.20
Minimum Educational Qualification & Experience	12th Class (Science stream) OR 10th Class (2 years course in relevant stream) OR 10th Class with 2 Years of experience relevant experience OR 10th Class + I.T.I (2 years)
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	1. Food standards and regulations 2. Quality analysis procedures for food and agricultural commodities 3. Food lab equipments and its handling 4. GMP 5. HACCP 6. QMS 7. Computer basics and ERP 8. Training in Food Safety Standards and Regulations (as per FSSAI) (Mandatory)
Minimum Job Entry Age	18 Years
Last Reviewed On	29/07/2021
Next Review Date	29/07/2024
Deactivation Date	29/07/2024
NSQC Approval Date	29/07/2021
Version	2.0
Reference code on NQR	2021/FI/FICSI/04367
NQR Version	1

Remarks:

Nil

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FIC/N7602: Prepare for quality analysis and manage housekeeping for food lab activities

Description

This OS unit is about preparing for quality analysis and managing housekeeping as per the specifications and standards of the organization.

Elements and Performance Criteria

Calibrate and maintain equipments (for food lab activities)

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

- PC1.** read and understand the instructions from the food lab technician
- PC2.** read and understand the standard operating procedures (SOP) for calibration of each equipments
- PC3.** calibrate equipments like weighing scale, measuring jars, ph meter etc on daily basis
- PC4.** record the reading in the calibration register
- PC5.** handle and maintain tools (deadweights, calibrated measuring jars) and reagent (standard solutions) used for calibration of equipments following laboratory procedures and standards
- PC6.** maintain list of all equipments along with its calibration frequency
- PC7.** update the lab technician in advance on external calibration dates, follow up with external labs and ensure external calibration of equipments on time
- PC8.** maintain record/file on external calibration reports
- PC9.** check the working and performance of all equipments on regular basis
- PC10.** report any malfunction/repairs to the lab technician
- PC11.** inform the supplier/manufacturer on the malfunction/repairs and get it repaired immediately
- PC12.** maintain list of all equipments along with the details of annual maintenance contract
- PC13.** follow up with the annual maintenance contractor and ensure maintenance of all equipments
- PC14.** record all details on lab equipment like performance, faults, repairs, annual maintenance etc in the equipment register and in ERP

Prepare re agents (for food lab activities)

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

- PC15.** read and understand the sops for preparing each reagent
- PC16.** weigh required chemicals and measure solvents in calibrated instruments and measuring jars
- PC17.** mix solvents and chemicals and maintain required conditions following the procedure for preparing the reagents
- PC18.** prepare standards solutions for calibration of equipments
- PC19.** switch on the water distillation unit and prepare distilled water
- PC20.** ensure availability of distilled water and standard solutions all time
- PC21.** store the chemicals, solvents, acids, reagents etc following manufacturers instructions (from the label) or following laboratory procedures and standards

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- PC22.** maintain list of all chemicals, solvents, acids, reagents, glass wares, consumables, equipment spares etc used in the laboratory
- PC23.** check the inventory of lab chemicals, glass wares, consumables, equipment spares at regular intervals in the register and erp and update lab technician on the inventory status
- PC24.** prepare purchase requisition for lab chemicals, glass wares, consumables, equipment spares with the approval of superiors, and process requisition
- PC25.** ensure and maintain inventory of all lab chemicals, glass wares, consumables, equipment spares etc
- PC26.** clean the glassware used for analysis with recommended detergents, disinfectants and sanitizers
- PC27.** clean and maintain equipments used following the maintenance procedures for equipments

Manage housekeeping (for food lab activities)

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

- PC28.** read and understand the SOP and checklist for housekeeping
- PC29.** visit the warehouses (raw materials, packaging materials, finished goods), process/production area, packaging area, laboratory at regular intervals and perform checks based on the housekeeping checklist
- PC30.** inform the food lab technician in case of any deviation
- PC31.** understand the suggested corrective action
- PC32.** ensure to implement the corrective action immediately
- PC33.** file the housekeeping checklist
- PC34.** maintain records on all documents related to the housekeeping activity

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 products produced in the organisation
- KU10.** equipments used in the laboratory and its maintenance procedure
- KU11.** frequency for calibration of equipments
- KU12.** procedure for calibration of each equipments
- KU13.** types of chemicals used in the organisation laboratory
- KU14.** reagents required for calibration, analysis of raw materials, packaging materials and finished products

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- KU15.** procedure for preparation of all reagents required for analysis of raw materials, packaging materials and finished products
- KU16.** frequency for preparation of required reagents
- KU17.** basic food microbiology
- KU18.** mathematical ability
- KU19.** knowledge on sanitizers and disinfectants and its handling and storing methods
- KU20.** various laboratory techniques
- KU21.** food laws and regulations on product, packaging and labelling
- KU22.** food safety and hygiene
- KU23.** good manufacturing practice (GMP)
- KU24.** hazard analysis and critical control point (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
- 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

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- GS20.** plan and prioritize the work based on the instructions received from the supervisor
- GS21.** plan to utilise 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>Calibrate and maintain equipments (for food lab activities)</i>	14	26	-	-
PC1. read and understand the instructions from the food lab technician	1.5	0.5	-	-
PC2. read and understand the standard operating procedures (SOP) for calibration of each equipments	1.5	0.5	-	-
PC3. calibrate equipments like weighing scale, measuring jars, ph meter etc on daily basis	2	3	-	-
PC4. record the reading in the calibration register	0.5	1.5	-	-
PC5. handle and maintain tools (deadweights, calibrated measuring jars) and reagent (standard solutions) used for calibration of equipments following laboratory procedures and standards	1	2	-	-
PC6. maintain list of all equipments along with its calibration frequency	0.5	1.5	-	-
PC7. update the lab technician in advance on external calibration dates, follow up with external labs and ensure external calibration of equipments on time	1	2	-	-
PC8. maintain record/file on external calibration reports	0.5	1.5	-	-
PC9. check the working and performance of all equipments on regular basis	1	3	-	-
PC10. report any malfunction/repairs to the lab technician	1	1	-	-
PC11. inform the supplier/manufacture on the malfunction/repairs and get it repaired immediately	1	2	-	-
PC12. maintain list of all equipments along with the details of annual maintenance contract	0.5	1.5	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. follow up with the annual maintenance contractor and ensure maintenance of all equipments	1	3	-	-
PC14. record all details on lab equipment like performance, faults, repairs, annual maintenance etc in the equipment register and in ERP	1	3	-	-
<i>Prepare re agents (for food lab activities)</i>	12.5	27.5	-	-
PC15. read and understand the sops for preparing each reagent	0.5	1.5	-	-
PC16. weigh required chemicals and measure solvents in calibrated instruments and measuring jars	1	3	-	-
PC17. mix solvents and chemicals and maintain required conditions following the procedure for preparing the reagents	2	3	-	-
PC18. prepare standards solutions for calibration of equipments	2	3	-	-
PC19. switch on the water distillation unit and prepare distilled water	1	3	-	-
PC20. ensure availability of distilled water and standard solutions all time	0.5	1.5	-	-
PC21. store the chemicals, solvents, acids, reagents etc following manufacturers instructions (from the label) or following laboratory procedures and standards	0.5	1.5	-	-
PC22. maintain list of all chemicals, solvents, acids, reagents, glass wares, consumables, equipment spares etc used in the laboratory	1	2	-	-
PC23. check the inventory of lab chemicals, glass wares, consumables, equipment spares at regular intervals in the register and erp and update lab technician on the inventory status	1	2	-	-
PC24. prepare purchase requisition for lab chemicals, glass wares, consumables, equipment spares with the approval of superiors, and process requisition	1	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. ensure and maintain inventory of all lab chemicals, glass wares, consumables, equipment spares etc	1	2	-	-
PC26. clean the glassware used for analysis with recommended detergents, disinfectants and sanitizers	0.5	1.5	-	-
PC27. clean and maintain equipments used following the maintenance procedures for equipments	0.5	1.5	-	-
<i>Manage housekeeping (for food lab activities)</i>	8.5	11.5	-	-
PC28. read and understand the SOP and checklist for housekeeping	1.5	0.5	-	-
PC29. visit the warehouses (raw materials, packaging materials, finished goods), process/production area, packaging area, laboratory at regular intervals and perform checks based on the housekeeping checklist	2	6	-	-
PC30. inform the food lab technician in case of any deviation	1	1	-	-
PC31. understand the suggested corrective action	0.5	1.5	-	-
PC32. ensure to implement the corrective action immediately	0.5	1.5	-	-
PC33. file the housekeeping checklist	1.5	0.5	-	-
PC34. maintain records on all documents related to the housekeeping activity	1.5	0.5	-	-
NOS Total	35	65	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7602
NOS Name	Prepare for quality analysis and manage housekeeping for food lab activities
Sector	Food Processing
Sub-Sector	Fruits and Vegetables, Food Grain Milling (including oilseeds), Dairy Products, Meat and Poultry, Fish and Sea Food, Bread and Bakery, Alcoholic Beverages, Aerated Water/Soft Drinks, Soya Food, Packaged Foods
Occupation	Quality Analysis
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	29/07/2021
Next Review Date	29/07/2024
NSQC Clearance Date	29/07/2021

Qualification Pack

FIC/N7603: Sampling and quality analysis for food 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.** sample the raw materials (agricultural produce, ingredients, flavors, emulsifiers, preservatives etc) from the delivery truck/warehouse/storage area following SOP
- PC3.** sample the packaging materials (bottle, cap, crown, can, carton, label, pouch etc) from the delivery truck/warehouse/storage area following SOP
- PC4.** sample production samples from the production line/process line based on the frequency followed by the organisation (for analysis and to maintain production control sample)
- PC5.** sample the finished product(s) from the production storage area/warehouse
- PC6.** sample shelf life sample from the shelf life storage room
- PC7.** collect the pre-shipment samples sent by the vendors from purchase/supply chain department
- PC8.** collect samples from effluent treatment plant following procedures and standards of the organisation
- PC9.** collect samples received from the market such as customer/consumer complaint samples, market samples, competitor sample
- PC10.** label the samples with details like sample name, date and time of sampling, batch/manufacture /expiry details (as applicable)
- PC11.** collect all documents pertaining to incoming lab samples like copy of purchase order, invoice, certificate of analysis etc for verification and records
- PC12.** ensure all documents are provided by the supplier as per organisation standards
- PC13.** transfer the samples to food lab and place in the designated area for analysis
- PC14.** verify the certificate of analysis (coa) against organisation standards
- PC15.** record the sample details in the lab register and file the supplier documents
- PC16.** file and maintain all documents related to sample along with the test report
- PC17.** transfer the production control sample and shelf life sample to the control sample/shelf-life sample room
- PC18.** record the sample details in production control sample register and shelf-life sample register, and upload in ERP
- PC19.** monitor and maintain the storage conditions (like temperature, humidity, cleanliness etc) of the control sample/ shelf-life sample room
- PC20.** dispose the control sample and shelf-life sample after the control period following disposal procedures and as per organisation standards

Quality analysis of samples (for food lab activities)

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

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- PC21.** read and understand the standard operating procedures (sop) for analysis of each sample
- PC22.** carry out analysis in calibrated equipments following standard operating procedure
- PC23.** perform basic tests on physical parameters like colour, appearance, texture, weight, count etc on food and agricultural commodity samples collected
- PC24.** perform basic chemical analysis like moisture content, bulk density, ph, total soluble solids (tss) using refractometer, etc on food and agricultural commodity samples collected
- PC25.** perform tests on packaging material like measuring dimensions of all packaging materials , checking the printed matter and comparing with standard, checking strength of cartons etc for all samples collected
- PC26.** inform the food lab technician of any discrepancies in the analysis result
- PC27.** record the skill results in the quality analysis register
- PC28.** enter the results in the erp system
- PC29.** clean the glassware used with recommended detergents, disinfectants and sanitizers
- PC30.** 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 raw materials, packaging materials used and finished products processed in the organisation
- KU10.** types of products produced in the organisation
- KU11.** equipments used in the laboratory and its maintenance procedure
- KU12.** frequency and procedure for calibration of each equipments
- KU13.** types of chemicals used in the organisation laboratory
- KU14.** reagents required for analysis of raw materials, packaging materials and finished products
- KU15.** procedure for preparation of all reagents required for analysis of raw materials, packaging materials and finished products
- KU16.** frequency for preparation of required reagents
- KU17.** SOPs for equipments and analysis parameters
- KU18.** sampling methods and procedures for raw materials, packaging materials, finished products
- KU19.** sampling procedure and sampling frequency for production/process samples, shelf-life studies samples

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- KU20.** method to verify supplier documents against organisation standards
- KU21.** tests to be carried out for raw materials, packaging materials and finished products
- KU22.** procedures for analysis of all quality parameters and frequency of analysis of each parameter
- KU23.** procedures for storing, maintaining and disposing production control sample
- KU24.** basic food microbiology
- KU25.** methods and procedures for maintaining shelf-life samples and carrying out shelf-life studies
- KU26.** attending and handling market complaints
- KU27.** inventory management of lab supplies
- KU28.** process methods for all products produced in the organisation
- KU29.** machineries used in production / process
- KU30.** types and category of packaging materials, packaging machineries
- KU31.** storage procedures for raw materials, packaging materials and finished goods
- KU32.** cleaning procedures like CIP and COP
- KU33.** knowledge on sanitizers and disinfectants and its handling and storing methods
- KU34.** various laboratory techniques
- KU35.** food laws and regulations on product, packaging and labelling
- KU36.** food safety and hygiene
- KU37.** GMP
- KU38.** 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
- 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

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- 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 utilise 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>	24	36	-	-
PC1. read and understand the sampling instructions from the food lab technician	0.5	1.5	-	-
PC2. sample the raw materials (agricultural produce, ingredients, flavors, emulsifiers, preservatives etc) from the delivery truck/warehouse/storage area following SOP	2	3	-	-
PC3. sample the packaging materials (bottle, cap, crown, can, carton, label, pouch etc) from the delivery truck/warehouse/storage area following SOP	2	3	-	-
PC4. sample production samples from the production line/process line based on the frequency followed by the organisation (for analysis and to maintain production control sample)	2	3	-	-
PC5. sample the finished product(s) from the production storage area/warehouse	2	3	-	-
PC6. sample shelf life sample from the shelf life storage room	2	3	-	-
PC7. collect the pre-shipment samples sent by the vendors from purchase/supply chain department	1	2	-	-
PC8. collect samples from effluent treatment plant following procedures and standards of the organisation	1	2	-	-
PC9. collect samples received from the market such as customer/consumer complaint samples, market samples, competitor sample	1	2	-	-
PC10. label the samples with details like sample name, date and time of sampling, batch/manufacture /expiry details (as applicable)	1	2	-	-
PC11. collect all documents pertaining to incoming lab samples like copy of purchase order, invoice, certificate of analysis etc for verification and records	0.5	1.5	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. ensure all documents are provided by the supplier as per organisation standards	0.5	1.5	-	-
PC13. transfer the samples to food lab and place in the designated area for analysis	0.5	1.5	-	-
PC14. verify the certificate of analysis (coa) against organisation standards	1.5	1.5	-	-
PC15. record the sample details in the lab register and file the supplier documents	1.5	0.5	-	-
PC16. file and maintain all documents related to sample along with the test report	1.5	0.5	-	-
PC17. transfer the production control sample and shelf life sample to the control sample/shelf-life sample room	0.5	1.5	-	-
PC18. record the sample details in production control sample register and shelf-life sample register, and upload in ERP	1.5	0.5	-	-
PC19. monitor and maintain the storage conditions (like temperature, humidity, cleanliness etc) of the control sample/ shelf-life sample room	1	1	-	-
PC20. dispose the control sample and shelf-life sample after the control period following disposal procedures and as per organisation standards	0.5	1.5	-	-
<i>Quality analysis of samples (for food lab activities)</i>	11	29	-	-
PC21. read and understand the standard operating procedures (sop) for analysis of each sample	0.5	1.5	-	-
PC22. carry out analysis in calibrated equipments following standard operating procedure	2	5	-	-
PC23. perform basic tests on physical parameters like colour, appearance, texture, weight, count etc on food and agricultural commodity samples collected	2	5	-	-
PC24. perform basic chemical analysis like moisture content, bulk density, ph, total soluble solids (tss) using refractometer, etc on food and agricultural commodity samples collected	2	5	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. perform tests on packaging material like measuring dimensions of all packaging materials , checking the printed matter and comparing with standard, checking strength of cartons etc for all samples collected	2	5	-	-
PC26. inform the food lab technician of any discrepancies in the analysis result	0.5	1.5	-	-
PC27. record the results in the quality analysis register	0.5	1.5	-	-
PC28. enter the results in the erp system	0.5	1.5	-	-
PC29. clean the glassware used with recommended detergents, disinfectants and sanitizers	0.5	1.5	-	-
PC30. Clean and maintain equipments used, following maintenance procedures for equipments	0.5	1.5	-	-
NOS Total	35	65	-	-

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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	Fruits and Vegetables, Food Grain Milling (including oilseeds), Dairy Products, Meat and Poultry, Fish and Sea Food, Bread and Bakery, Alcoholic Beverages, Aerated Water/Soft Drinks, Soya Food, Packaged Foods
Occupation	Quality Analysis
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	29/07/2021
Next Review Date	29/07/2024
NSQC Clearance Date	29/07/2021

Qualification Pack

FIC/N7604: Complete documentation and record keeping related to performing food lab activities

Description

This OS unit is about documenting and maintaining records on sampling and analysis of raw materials, packaging materials, finished products, production sample, market sample and production control sample, equipment calibration and regulatory requirements for performing food lab activities.

Elements and Performance Criteria

Document and maintain records of raw material and packaging material (for performing food lab activities)

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

- PC1.** document and maintain records of all raw materials and packaging materials sampled such as place of sampling, sampling procedure, details of sample such as supplier information, batch number, receiving date/ date of manufacture, expiry date, supplier quality document, supplier documents (P.O., invoice, certificate of analysis, etc.), condition of the transport vehicle, condition of raw material etc., as per company standards
- PC2.** document and maintain records on raw materials and packaging material analysis such as parameters analyzed, method of analysis, storage of sample, equipments used for analysis, analysis results, certificate of analysis, etc. as per company standards
- PC3.** maintain record of observations (if any) related to raw materials, packaging materials
- PC4.** load the analysis details in ERP for future reference
- PC5.** verify the documents and track from finished product to raw materials, in case of quality concerns and during quality management system audits

Document and maintain records of finished products, production sample, control sample and shelf-life sample (for performing food lab activities)

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

- PC6.** document and maintain records on analysis of production samples such as sampling stage/sampling area (in the process line), sampling methods and sampling condition, date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis, etc. as per company standards
- PC7.** document and maintain records on analysis of finished products such as batch number, sampling methods and sampling condition, date of manufacture, expiry date, label details, parameters analyzed, method of analysis, storage of sample, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis, etc. as per company standards
- PC8.** document and maintain records on analysis of finished products such as batch number, sample storage conditions, methods and sampling condition, date of manufacture, expiry date, label details, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis etc, as per company standards

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- PC9.** document and maintain records on analysis of shelf-life samples for all products such as batch number, sample storage conditions, methods and sampling condition, date of manufacture, expiry date, label details, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis, etc, as per company standards
- PC10.** maintain record on observations or deviations (if any)
- PC11.** load the analysis details in ERP for future reference
- PC12.** verify documents and track from finished product to raw materials, in case of quality concerns and for quality management system audits

Document and maintain records of market samples (for performing food lab activities)

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

- PC13.** document and maintain records on analysis of market samples such as product name, sampling location (in market), type of outlet, display condition, storage condition, sampling methods and sampling condition, method of transfer of sample to lab, physical condition of sample (package and product), date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, final remarks etc, as per company standards
- PC14.** document and maintain records on analysis of competitors sample from market samples such as product name, sampling location (in market), type of outlet, display condition, storage condition, sampling methods and sampling condition, method of transfer of sample to lab, physical condition of sample (package and product), date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, final remarks etc, as per company standards
- PC15.** document and maintain records on analysis of complaint sample (customer/consumer complaint) from market such as name of product, nature of complaint, complainant details, complaint location (in market), condition of the pack (opened/sealed), storage condition, sampling methods and sampling condition, method of transfer of sample to lab, physical condition of sample (package and product), date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, final remarks, root cause analysis report, suggested corrective action, corrective action taken, status of complain (open/close), methods of closing the complain etc, as per company standards
- PC16.** maintain record on observations or deviations (if any)
- PC17.** load the analysis details in erp for future reference
- PC18.** verify documents and track from finished product to raw materials, in case of quality concerns and for quality management system audits

Document and maintain records of equipment and calibrations (for performing food lab activities)

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

- PC19.** document and maintain records on equipments used for analysis, condition of the equipment, control used for analysis, equipment parameter, equipment performance, time taken for analysis, etc. as per company standards
- PC20.** document and maintain records of equipment calibration such as date of calibration, procedure and method used for calibration, errors/variations observed, calibration readings, internal and external calibration reports, reagents/standards/tools used for calibration condition of the equipment, etc. as per company standards
- PC21.** maintain record of observations or deviations (if any)

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- PC22.** load the details in erp for future reference
- PC23.** verify the documents and track from analysis report to equipment used, in case of quality concerns and for quality management system audits

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.** documentation system followed in the organization such as raw materials analysis chart, packaging materials analysis chart, finished product analysis chart, production sample analysis chart, control sample analysis chart, market sample analysis chart, complaint sample analysis chart
- KU10.** details to be recorded of raw materials, finished products, packaging materials, production sample, control sample, market sample, shelf life sample
- KU11.** details to be recorded and maintained of equipments, calibration, maintenance
- KU12.** methods to record and maintain records of observations (if any) related to quality analysis
- KU13.** methods to track back the record from finished product to raw material
- KU14.** basic computer knowledge
- KU15.** entering the details in ERP system followed by the organisation

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

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- GS9.** read equipment manuals and process documents to understand the equipments operation and process requirement
- GS10.** read internal information documents sent by internal teams
- 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 utilise 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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Document and maintain records of raw material and packaging material (for performing food lab activities)</i>	11	9	-	-
PC1. document and maintain records of all raw materials and packaging materials sampled such as place of sampling, sampling procedure, details of sample such as supplier information, batch number, receiving date/ date of manufacture, expiry date, supplier quality document, supplier documents (P.O., invoice, certificate of analysis, etc.), condition of the transport vehicle, condition of raw material etc., as per company standards	2	3	-	-
PC2. document and maintain records on raw materials and packaging material analysis such as parameters analyzed, method of analysis, storage of sample, equipments used for analysis, analysis results, certificate of analysis, etc. as per company standards	3	2	-	-
PC3. maintain record of observations (if any) related to raw materials, packaging materials	2	2	-	-
PC4. load the analysis details in ERP for future reference	2	1	-	-
PC5. verify the documents and track from finished product to raw materials, in case of quality concerns and during quality management system audits	2	1	-	-
<i>Document and maintain records of finished products, production sample, control sample and shelf-life sample (for performing food lab activities)</i>	25.5	14.5	-	-
PC6. document and maintain records on analysis of production samples such as sampling stage/sampling area (in the process line), sampling methods and sampling condition, date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis, etc. as per company standards	5	3	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC7. document and maintain records on analysis of finished products such as batch number, sampling methods and sampling condition, date of manufacture, expiry date, label details, parameters analyzed, method of analysis, storage of sample, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis, etc. as per company standards	5	3	-	-
PC8. document and maintain records on analysis of finished products such as batch number, sample storage conditions, methods and sampling condition, date of manufacture, expiry date, label details, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis etc, as per company standards	5	3	-	-
PC9. document and maintain records on analysis of shelf-life samples for all products such as batch number, sample storage conditions, methods and sampling condition, date of manufacture, expiry date, label details, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, certificate of analysis, etc, as per company standards	5	3	-	-
PC10. maintain record on observations or deviations (if any)	2	1	-	-
PC11. load the analysis details in ERP for future reference	1.5	0.5	-	-
PC12. verify documents and track from finished product to raw materials, in case of quality concerns and for quality management system audits	2	1	-	-
<i>Document and maintain records of market samples (for performing food lab activities)</i>	11.5	8.5	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. document and maintain records on analysis of market samples such as product name, sampling location (in market), type of outlet, display condition, storage condition, sampling methods and sampling condition, method of transfer of sample to lab, physical condition of sample (package and product), date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, final remarks etc, as per company standards	3	2	-	-
PC14. document and maintain records on analysis of competitors sample from market samples such as product name, sampling location (in market), type of outlet, display condition, storage condition, sampling methods and sampling condition, method of transfer of sample to lab, physical condition of sample (package and product), date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, final remarks etc, as per company standards	3	2	-	-
PC15. document and maintain records on analysis of complaint sample (customer/consumer complaint) from market such as name of product, nature of complaint, complainant details, complaint location (in market), condition of the pack (opened/sealed), storage condition, sampling methods and sampling condition, method of transfer of sample to lab, physical condition of sample (package and product), date of manufacture, expiry date, parameters analyzed, method of analysis, equipments used for analysis, analysis results, print of graph/chart obtained, final remarks, root cause analysis report, suggested corrective action, corrective action taken, status of complain (open/close), methods of closing the complain etc, as per company standards	3	2	-	-
PC16. maintain record on observations or deviations (if any)	1.5	0.5	-	-
PC17. load the analysis details in erp for future reference	0.5	0.5	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC18. verify documents and track from finished product to raw materials, in case of quality concerns and for quality management system audits	0.5	1.5	-	-
<i>Document and maintain records of equipment and calibrations (for performing food lab activities)</i>	12	8	-	-
PC19. document and maintain records on equipments used for analysis, condition of the equipment, control used for analysis, equipment parameter, equipment performance, time taken for analysis, etc. as per company standards	3	2	-	-
PC20. document and maintain records of equipment calibration such as date of calibration, procedure and method used for calibration, errors/variations observed, calibration readings, internal and external calibration reports, reagents/standards/tools used for calibration condition of the equipment, etc. as per company standards	3	2	-	-
PC21. maintain record of observations or deviations (if any)	2	2	-	-
PC22. load the details in erp for future reference	2	1	-	-
PC23. verify the documents and track from analysis report to equipment used, in case of quality concerns and for quality management system audits	2	1	-	-
NOS Total	60	40	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7604
NOS Name	Complete documentation and record keeping related to performing food lab activities
Sector	Food Processing
Sub-Sector	Fruits and Vegetables, Food Grain Milling (including oilseeds), Dairy Products, Meat and Poultry, Fish and Sea Food, Bread and Bakery, Alcoholic Beverages, Aerated Water/Soft Drinks, Soya Food, Packaged Foods
Occupation	Quality Analysis
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	29/07/2021
Next Review Date	29/07/2024
NSQC Clearance Date	29/07/2021

Qualification Pack

FIC/N7605: Food safety, hygiene and sanitation for food lab testing

Description

This unit is about maintaining food safety, hygiene and sanitation in work area and processing unit for food lab testing.

Elements and Performance Criteria

Perform safety and sanitation related functions (for food lab testing)

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

- PC1.** comply with food safety and hygiene procedures followed in the organisation
- PC2.** ensure personal hygiene by use of gloves, hairnets, masks, ear plugs, goggles, shoes, etc
- PC3.** ensure hygienic production of food by inspecting raw materials, ingredients, finished products, etc. for compliance to physical, chemical and microbiological parameters
- PC4.** clean, maintain and monitor food processing equipment periodically, using it only for the specified purpose
- PC5.** use safety equipment such as fire extinguisher, first aid kit and eye-wash station when required
- PC6.** follow housekeeping practices by having designated area for materials/tools
- PC7.** follow industry standards such as gmp and haccp and product recall process
- PC8.** attend training on hazard management to understand types of hazards such as physical, chemical and biological hazards and measures to control and prevent them
- PC9.** identify, document and report problems such as rodents and pests to management
- PC10.** conduct workplace checklist audits before and after work to ensure safety and hygiene
- PC11.** document and maintain raw material, packaging material, process and finished products for the credibility and effectiveness of the food safety control system

Apply food safety practices (for food lab testing)

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

- PC12.** determine the quality of food using criteria such as odour, appearance, taste and best before date, and take immediate measures to prevent spoilage
- PC13.** store raw materials, finished products, allergens separately to prevent cross-contamination
- PC14.** label raw materials and finished products and store them in designated storage areas according to safe food practices
- PC15.** follow stock rotation based on FEFO/ FIFO

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

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- 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.** possible physical, chemical and biological hazards and methods of prevention of various hazards
- KU10.** personal hygiene requirement
- KU11.** different types of sanitizers used for process area, equipment and the procedure to use them
- KU12.** knowledge on food safety standards and regulations (as per FSSAI)
- KU13.** quality parameters and quality assessment based on physical parameters, basic food microbiology
- KU14.** labelling/marketing requirements for raw materials, finished goods, stored materials, packaging materials and their designated storage area
- KU15.** cleaning and sanitation of equipment and work area
- KU16.** CIP and COP methods and procedures
- KU17.** storage norms for raw materials, packaging material and finished products
- KU18.** stock rotation of ingredients and finished products based on FEFO/FIFO
- KU19.** method of maintaining safety check lists for all machineries
- KU20.** GHP
- KU21.** GMP
- KU22.** 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
- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with the team members

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- 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 utilise 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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform safety and sanitation related functions (for food lab testing)</i>	25	45	-	-
PC1. comply with food safety and hygiene procedures followed in the organisation	2	3	-	-
PC2. ensure personal hygiene by use of gloves, hairnets, masks, ear plugs, goggles, shoes, etc	1	5	-	-
PC3. ensure hygienic production of food by inspecting raw materials, ingredients, finished products, etc. for compliance to physical, chemical and microbiological parameters	2	3	-	-
PC4. clean, maintain and monitor food processing equipment periodically, using it only for the specified purpose	2	3	-	-
PC5. use safety equipment such as fire extinguisher, first aid kit and eye-wash station when required	4	6	-	-
PC6. follow housekeeping practices by having designated area for materials/tools	2	3	-	-
PC7. follow industry standards such as gmp and haccp and product recall process	4	6	-	-
PC8. attend training on hazard management to understand types of hazards such as physical, chemical and biological hazards and measures to control and prevent them	5	5	-	-
PC9. identify, document and report problems such as rodents and pests to management	1	4	-	-
PC10. conduct workplace checklist audits before and after work to ensure safety and hygiene	1	4	-	-
PC11. document and maintain raw material, packaging material, process and finished products for the credibility and effectiveness of the food safety control system	1	3	-	-
<i>Apply food safety practices (for food lab testing)</i>	10	20	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. determine the quality of food using criteria such as odour, appearance, taste and best before date, and take immediate measures to prevent spoilage	2	8	-	-
PC13. store raw materials, finished products, allergens separately to prevent cross-contamination	2	3	-	-
PC14. label raw materials and finished products and store them in designated storage areas according to safe food practices	2	3	-	-
PC15. follow stock rotation based on FEFO/ FIFO	4	6	-	-
NOS Total	35	65	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7605
NOS Name	Food safety, hygiene and sanitation for food lab testing
Sector	Food Processing
Sub-Sector	Fruits and Vegetables, Food Grain Milling (including oilseeds), Dairy Products, Meat and Poultry, Fish and Sea Food, Bread and Bakery, Alcoholic Beverages, Aerated Water/Soft Drinks, Soya Food, Packaged Foods
Occupation	Quality Analysis
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	29/07/2021
Next Review Date	29/07/2024
NSQF Clearance Date	29/07/2021

Qualification Pack

FIC/N7601: Prepare and maintain work area and equipments for food lab testing

Description

This unit is about preparing work area for hygiene and safety, and ensuring performance, efficiency and maintenance of laboratory equipments and tools , for food lab testing, as per the specifications and standards of the organization.

Elements and Performance Criteria

Prepare and maintain work area (for food lab testing)

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

- PC1.** clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, and spillage
- PC2.** ensure that the work area is safe and hygienic for food analysis
- PC3.** dispose waste materials as per defined SOPs and industry requirements

Prepare and maintain lab equipments and tools (for food lab testing)

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

- PC4.** check the working and performance of all machineries and tools used for process such as weighing scales, ph meter, moisture analyser, oven, water bath, sterilizer, sieve shaker, refractometer, TDS (total dissolved solvents) meter, equipments for testing packaging materials, etc.
- PC5.** clean the equipments and glass wares used with recommended sanitizers following specifications and organisation standards
- PC6.** attend minor repairs/faults of equipments, if required
- PC7.** organize glass wares and equipments for analysis

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 chemicals, materials and equipment required for the cleaning and maintenance
- KU10.** cleaning methods for all equipments

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- KU11.** supplier/manufacturers instructions related to cleaning and maintenance or equipments
- KU12.** knowledge of food safety standards and regulations (as per FSSAI)
- KU13.** knowledge of legal regulations pertaining to work place like health and safety, recommended dosage for use of sanitizers, control of substances hazardous to health, handling/storage/ disposal/ cautions of use of sanitizers and disinfectants, fire precautions, occurrences, hygiene practice, disposal of waste, environmental protection, etc.

Generic Skills (GS)

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

- GS1.** note the information communicated by the supervisor
- GS2.** note the details of food stored, storage parameters and provide necessary information to fill the storage chart
- GS3.** note the details of the refrigeration system and components, maintenance and service reports
- GS4.** note down observations (if any) related to the storage
- 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
- 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 utilise 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

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- 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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare and maintain work area (for food lab testing)</i>	18	32	-	-
PC1. clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, and spillage	10	15	-	-
PC2. ensure that the work area is safe and hygienic for food analysis	3	7	-	-
PC3. dispose waste materials as per defined SOPs and industry requirements	5	10	-	-
<i>Prepare and maintain lab equipments and tools (for food lab testing)</i>	17	33	-	-
PC4. check the working and performance of all machineries and tools used for process such as weighing scales, ph meter, moisture analyser, oven, water bath, sterilizer, sieve shaker, refractometer, TDS (total dissolved solvents) meter, equipments for testing packaging materials, etc.	5	10	-	-
PC5. clean the equipments and glass wares used with recommended sanitizers following specifications and organisation standards	5	10	-	-
PC6. attend minor repairs/faults of equipments, if required	2	3	-	-
PC7. organize glass wares and equipments for analysis	5	10	-	-
NOS Total	35	65	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7601
NOS Name	Prepare and maintain work area and equipments for food lab testing
Sector	Food Processing
Sub-Sector	Fruits and Vegetables, Food Grain Milling (including oilseeds), Dairy Products, Meat and Poultry, Fish and Sea Food, Bread and Bakery, Alcoholic Beverages, Aerated Water/Soft Drinks, Soya Food, Packaged Foods
Occupation	Quality Analysis
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	29/07/2021
Next Review Date	29/07/2024
NSQC Clearance Date	29/07/2021

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 %

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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.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N7602.Prepare for quality analysis and manage housekeeping for food lab activities	35	65	-	-	100	20
FIC/N7603.Sampling and quality analysis for food lab activities	35	65	-	-	100	25
FIC/N7604.Complete documentation and record keeping related to performing food lab activities	60	40	-	-	100	10
FIC/N7605.Food safety, hygiene and sanitation for food lab testing	35	65	-	-	100	30
FIC/N7601.Prepare and maintain work area and equipments for food lab testing	35	65	-	-	100	15
Total	200	300	-	-	500	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.

Qualification Pack

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.