



Qualification Pack

Oil Extraction and Refining Technician.

QP Code: FIC/Q1013

Version: 1.0

NSQF Level: 4.0

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FIC/Q1013: Oil Extraction and Refining Technician.

Brief Job Description

An Oil Extraction and Refining Technician is responsible for the extraction and refining of all types of edible vegetable oil by a process of receiving and cleaning the raw materials (oilseeds), drying and storing them, faking, pressing, extracting and refining crude oil.

Personal Attributes

An Oil Extraction and Refining Technician must possess the ability to plan, organise, prioritise, concentrate, and handle pressure. The individual must possess reading, writing, and communication skills. In addition, the individual must have mechanical aptitude and troubleshooting skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [FIC/N9026: Prepare for production](#)
2. [FIC/N1029: Carry out oil extraction](#)
3. [FIC/N1030: Carry out oil refining](#)
4. [FIC/N9906: Apply food safety guidelines in Food Processing](#)
5. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing-Food Grain Milling (including oilseeds)
Country	India
NSQF Level	4.0
Credits	15
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8160.1200

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Minimum Educational Qualification & Experience	12th grade Pass (or Equivalent) OR 10th grade pass with 3 Years of experience In Food Processing Industry OR Previous relevant Qualification of NSQF Level (3.5) with 1.5 years of experience in Food processing industry OR Previous relevant Qualification of NSQF Level (3) with 3 Years of experience in food processing industry
Minimum Level of Education for Training in School	12th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	06/02/2029
NSQC Approval Date	06/02/2026
Version	1.0
Reference code on NQR	QG-04-FI-04923-2026-V1-FICSI
NQR Version	1.0

Remarks:

NA

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FIC/N9026: Prepare for production

Description

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

Scope

The scope covers the following :

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

Elements and Performance Criteria

Plan for production

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

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

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

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

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

Organize for production

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

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

Knowledge and Understanding (KU)

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The individual on the job needs to know and understand:

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

Generic Skills (GS)

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

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

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Assessment Criteria

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

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

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9026
NOS Name	Prepare for production
Sector	Food Processing
Sub-Sector	Generic
Occupation	Production
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	06/02/2026
Next Review Date	06/02/2029
NSQC Clearance Date	06/02/2026

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FIC/N1029: Carry out oil extraction

Description

This NOS unit is about oil extraction using various methods and machineries as per the specifications and standards of the organization.

Scope

The scope covers the following :

- Pre-processing of raw materials
- Extract oil by pressing method
- Extract oil by solvent extraction method
- Perform cold press oil extraction

Elements and Performance Criteria

Pre-processing of raw materials

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

- PC1.** • check and verify the weight and quality of the received raw materials through physical parameters from the supplier/warehouse
• Raw materials: oil seeds such as peanut, sunflower seed, sesame seeds, soya bean, corn, etc.
• Physical parameters: such as appearance, colour, odour, texture etc.
- PC2.** check safety norms of the defined work area and inform the safety in-charge if any non-compliance is observed.
- PC3.** interpret the process flow chart/formulation chart to identify the sequence of operations and process parameters.
- PC4.** transfer accepted raw materials to designated storage silos or bins as per standard operating procedures (SOP).
- PC5.** set up and assemble processing equipment and connections required for oil extraction, ensuring proper alignment of pipes, fittings, valves, and auxiliary components.
- PC6.** transfer raw materials from the storage silo to the cleaning machine as per the production schedule.
- PC7.** remove lighter impurities such as dust, straw, husk, and sticks using air aspiration or sieving equipment.
- PC8.** carry out the de-stoning process to remove heavier impurities and collect cleaned, de-stoned materials.
- PC9.** dispose of collected waste and impurities as per environmental and organisational SOPs.
- PC10.** transfer cleaned materials to the drying unit.
- PC11.** set controls of the dryer (temperature, air-flow, drying time) and perform the drying process to achieve the required moisture content (typically 6-8%).
- PC12.** set controls of the cooling fan (speed, air-flow) to perform cooling of the dried materials and bring them to ambient temperature.
- PC13.** transfer dried and cooled materials to intermediate holding bins for further processing.

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- PC14.** set controls of the cracking mill (roller speed, clearance) to carry out the cracking of the cleaned and dried raw materials.
- PC15.** separate kernels and remove hulls by operating the de-hulling machine, if required for the type of seed.
- PC16.** adjust roller clearance in the flaking machine and feed cracked kernels through the hopper to obtain uniform flakes.
- PC17.** collect and inspect flakes for uniform thickness and structural integrity.
- PC18.** set parameters of the conditioning/cooking vessel (temperature, pressure, time) to prepare the flakes for oil extraction.
- PC19.** maintain process parameters by observing gauges and adjusting controls to ensure proper conditioning.
- PC20.** check the temperature and moisture content of the conditioned material and adjust by injecting water or steam as required.

Extract oil by pressing method

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

- PC21.** feed measured quantity of conditioned raw materials into the screw press/extractor at a controlled rate.
- PC22.** set and monitor press parameters such as screw speed, barrel temperature, and pressure for efficient oil extraction.
- PC23.** take the sample of expelled oil cake/meal to assess the temperature and to determine that sufficient amount of oil has been removed
- PC24.** take a sample of the pressed oil cake or meal to assess residual oil content and temperature, and adjust press pressure or speed if required.
- PC25.** filter crude oil to remove suspended impurities before storage or refining.
- PC26.** take a representative sample of filtered oil and send it to the quality control laboratory for analysis.
- PC27.** transfer filtered crude oil to refining tanks or temporary storage as per SOP.
- PC28.** collect the by-product (oil cake/meal) for further processing, such as solvent extraction or for use as animal feed after drying and packing.

Extract oil by solvent extraction method

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

- PC29.** weigh flaked raw materials (oilseeds or oil cake/ meal) and transfer into the feeding hopper
- PC30.** adjust conveyor speed to maintain a uniform feeding rate of raw material into the extractor.
- PC31.** adjust dampers of the extractor conveyor to adjust the height of raw materials bed in the extractor
- PC32.** spray solvent and oil-solvent mixture (miscella) on the bed of raw materials flakes for oil extraction and on the materials conveyor screen to prevent clogging
- PC33.** collect the oil rich solvent (full miscella) in collection tank and oil extracted flakes
- PC34.**
 - transfer full miscella into distillation system and maintain process parameters for distillation system to remove solvent and separate oil
 - Distillation system: flash evaporator/ vacuum distillation unit/steam stripping unit
 - Controls of the distillation system: such as temperature, pressure, etc.
- PC35.** collect crude oil in container/storage tank after solvent recovery.
- PC36.** take sample of the crude oil and transfer it to quality lab for analysis

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- PC37.** transfer spent meal to the desolventizer-toaster (DT) and set parameters such as temperature, steam pressure, and rotation speed to remove residual solvent and moisture.
- PC38.** cool, pack, and store desolventized meal as per SOP.
- PC39.** handle, store, and recover solvent safely in compliance with fire and environmental safety procedures.
- PC40.** record process parameters, yields, and solvent recovery details as per documentation and traceability SOPs.

Perform cold press oil extraction

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

- PC41.** select high-quality oilseeds (e.g., sesame, coconut, mustard, groundnut) and ensure they are cleaned and dried.
- PC42.** inspect oilseeds for impurities, moisture content, and foreign particles.
- PC43.** set up the cold press machine (screw press/hydraulic press/wooden ghani) as per SOP.
- PC44.** adjust machine parameters like pressure, speed, and temperature to ensure oil is extracted without exceeding 40-50°C.
- PC45.** feed the cleaned oilseeds into the cold press machine.
- PC46.** monitor the extraction process to ensure optimal yield without excessive heat generation.
- PC47.** collect raw oil in a stainless steel container to avoid contamination.
- PC48.** separate oilcake/residue and store it for by-product utilization (animal feed, organic manure).
- PC49.** use gravity filtration or fine cloth filter to remove sediments.
- PC50.** transfer filtered oil to a food-grade stainless steel or glass container.
- PC51.** store the oil in dark, cool conditions to prevent oxidation.
- PC52.** label and package oil as per regulatory and food safety standards.
- PC53.** conduct quality checks for parameters like colour, aroma, moisture, and free fatty acids.
- PC54.** maintain hygiene of the extraction area, cleaning machines and tools after each batch.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** types of raw materials used in oil extraction process
- KU2.** standard parameters to check and verify the quality of the raw materials
- KU3.** procedure to perform the cooling process of the dried raw materials
- KU4.** operating procedure and general maintenance of food production machineries
- KU5.** waste management procedures
- KU6.** methods of the oil extraction like mechanical pressing, solvent extraction, and cold pressing, and their process flow
- KU7.** organization's production process, work instructions, and standard operating procedures (SOPs) for oil extraction
- KU8.** importance of moisture control, conditioning, and pre-treatment of oilseeds for efficient extraction
- KU9.** roles and responsibilities of operators, supervisors, and quality control personnel in the oil extraction unit.

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- KU10.** operating procedures of all machineries and equipment used in oil extraction, such as drier, cleaning machine, de-stoner, cracking mill, cooking /conditioning equipment, screw press machine, solvent sprayers, distillation system, etc.
- KU11.** principle and operation of traditional wooden ghani (cold-press) and differentiate it from mechanical screw press extraction
- KU12.** sample collection procedures of RM and PM, SFG, FG
- KU13.** types of packaging materials and machineries
- KU14.** standard procedure to store the extracted crude oil
- KU15.** organisational and FSSAI laws and regulations on product, R.M,P.M etc.
- KU16.** calibration of the weighing balance, pressure gauge, and temperature probe before the start of operation
- KU17.** cleaning and maintenance requirements for extraction equipment, tools, and work areas to maintain hygiene and prevent contamination
- KU18.** production data, batch numbers, and storage details for traceability.

Generic Skills (GS)

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

- GS1.** knowledge of documentation and record keeping
- GS2.** note down the information communicated by the senior/supervisor, observations (if any) related to the process, and data for online erp or as per applicability in the organization
- GS3.** read and interpret the work order from the supervisor, certificate of analysis, analysis report from internal lab, process required for producing various types of products, equipment manuals and process documents to understand the equipments operation and process requirement
- GS4.** communicate effectively with subordinates as well as supervisors
- GS5.** plan and prioritize various tasks as per standards
- GS6.** discuss task lists, schedules, and activities for carry out production with the senior/supervisor

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Pre-processing of raw materials</i>	14	17	-	3
<p>PC1.</p> <ul style="list-style-type: none"> check and verify the weight and quality of the received raw materials through physical parameters from the supplier/warehouse Raw materials: oil seeds such as peanut, sunflower seed, sesame seeds, soya bean, corn, etc. Physical parameters: such as appearance, colour, odour, texture etc. 	-	-	-	-
<p>PC2. check safety norms of the defined work area and inform the safety in-charge if any non-compliance is observed.</p>	-	-	-	-
<p>PC3. interpret the process flow chart/formulation chart to identify the sequence of operations and process parameters.</p>	-	-	-	-
<p>PC4. transfer accepted raw materials to designated storage silos or bins as per standard operating procedures (SOP).</p>	-	-	-	-
<p>PC5. set up and assemble processing equipment and connections required for oil extraction, ensuring proper alignment of pipes, fittings, valves, and auxiliary components.</p>	-	-	-	-
<p>PC6. transfer raw materials from the storage silo to the cleaning machine as per the production schedule.</p>	-	-	-	-
<p>PC7. remove lighter impurities such as dust, straw, husk, and sticks using air aspiration or sieving equipment.</p>	-	-	-	-
<p>PC8. carry out the de-stoning process to remove heavier impurities and collect cleaned, de-stoned materials.</p>	-	-	-	-
<p>PC9. dispose of collected waste and impurities as per environmental and organisational SOPs.</p>	-	-	-	-
<p>PC10. transfer cleaned materials to the drying unit.</p>	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. set controls of the dryer (temperature, air-flow, drying time) and perform the drying process to achieve the required moisture content (typically 6–8%).	-	-	-	-
PC12. set controls of the cooling fan (speed, air-flow) to perform cooling of the dried materials and bring them to ambient temperature.	-	-	-	-
PC13. transfer dried and cooled materials to intermediate holding bins for further processing.	-	-	-	-
PC14. set controls of the cracking mill (roller speed, clearance) to carry out the cracking of the cleaned and dried raw materials.	-	-	-	-
PC15. separate kernels and remove hulls by operating the de-hulling machine, if required for the type of seed.	-	-	-	-
PC16. adjust roller clearance in the flaking machine and feed cracked kernels through the hopper to obtain uniform flakes.	-	-	-	-
PC17. collect and inspect flakes for uniform thickness and structural integrity.	-	-	-	-
PC18. set parameters of the conditioning/cooking vessel (temperature, pressure, time) to prepare the flakes for oil extraction.	-	-	-	-
PC19. maintain process parameters by observing gauges and adjusting controls to ensure proper conditioning.	-	-	-	-
PC20. check the temperature and moisture content of the conditioned material and adjust by injecting water or steam as required.	-	-	-	-
<i>Extract oil by pressing method</i>	6	8	-	2
PC21. feed measured quantity of conditioned raw materials into the screw press/extractor at a controlled rate.	-	-	-	-
PC22. set and monitor press parameters such as screw speed, barrel temperature, and pressure for efficient oil extraction.	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC23. take the sample of expelled oil cake/meal to assess the temperature and to determine that sufficient amount of oil has been removed	-	-	-	-
PC24. take a sample of the pressed oil cake or meal to assess residual oil content and temperature, and adjust press pressure or speed if required.	-	-	-	-
PC25. filter crude oil to remove suspended impurities before storage or refining.	-	-	-	-
PC26. take a representative sample of filtered oil and send it to the quality control laboratory for analysis.	-	-	-	-
PC27. transfer filtered crude oil to refining tanks or temporary storage as per SOP.	-	-	-	-
PC28. collect the by-product (oil cake/meal) for further processing, such as solvent extraction or for use as animal feed after drying and packing.	-	-	-	-
<i>Extract oil by solvent extraction method</i>	9	12	-	3
PC29. weigh flaked raw materials (oilseeds or oil cake/ meal) and transfer into the feeding hopper	-	-	-	-
PC30. adjust conveyor speed to maintain a uniform feeding rate of raw material into the extractor.	-	-	-	-
PC31. adjust dampers of the extractor conveyor to adjust the height of raw materials bed in the extractor	-	-	-	-
PC32. spray solvent and oil-solvent mixture (miscella) on the bed of raw materials flakes for oil extraction and on the materials conveyor screen to prevent clogging	-	-	-	-
PC33. collect the oil rich solvent (full miscella) in collection tank and oil extracted flakes	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC34. <ul style="list-style-type: none"> transfer full miscella into distillation system and maintain process parameters for distillation system to remove solvent and separate oil Distillation system: flash evaporator/ vacuum distillation unit/steam stripping unit Controls of the distillation system: such as temperature, pressure, etc. 	-	-	-	-
PC35. collect crude oil in container/storage tank after solvent recovery.	-	-	-	-
PC36. take sample of the crude oil and transfer it to quality lab for analysis	-	-	-	-
PC37. transfer spent meal to the desolventizer-toaster (DT) and set parameters such as temperature, steam pressure, and rotation speed to remove residual solvent and moisture.	-	-	-	-
PC38. cool, pack, and store desolventized meal as per SOP.	-	-	-	-
PC39. handle, store, and recover solvent safely in compliance with fire and environmental safety procedures.	-	-	-	-
PC40. record process parameters, yields, and solvent recovery details as per documentation and traceability SOPs.	-	-	-	-
<i>Perform cold press oil extraction</i>	11	13	-	2
PC41. select high-quality oilseeds (e.g., sesame, coconut, mustard, groundnut) and ensure they are cleaned and dried.	-	-	-	-
PC42. inspect oilseeds for impurities, moisture content, and foreign particles.	-	-	-	-
PC43. set up the cold press machine (screw press/hydraulic press/wooden ghani) as per SOP.	-	-	-	-
PC44. adjust machine parameters like pressure, speed, and temperature to ensure oil is extracted without exceeding 40-50°C.	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC45. feed the cleaned oilseeds into the cold press machine.	-	-	-	-
PC46. monitor the extraction process to ensure optimal yield without excessive heat generation.	-	-	-	-
PC47. collect raw oil in a stainless steel container to avoid contamination.	-	-	-	-
PC48. separate oilcake/residue and store it for by-product utilization (animal feed, organic manure).	-	-	-	-
PC49. use gravity filtration or fine cloth filter to remove sediments.	-	-	-	-
PC50. transfer filtered oil to a food-grade stainless steel or glass container.	-	-	-	-
PC51. store the oil in dark, cool conditions to prevent oxidation.	-	-	-	-
PC52. label and package oil as per regulatory and food safety standards.	-	-	-	-
PC53. conduct quality checks for parameters like colour, aroma, moisture, and free fatty acids.	-	-	-	-
PC54. maintain hygiene of the extraction area, cleaning machines and tools after each batch.	-	-	-	-
NOS Total	40	50	-	10

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N1029
NOS Name	Carry out oil extraction
Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing-Food Grain Milling (including oilseeds)
NSQF Level	4
Credits	6
Version	2.0
Last Reviewed Date	06/02/2026
Next Review Date	06/02/2029
NSQF Clearance Date	06/02/2026

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FIC/N1030: Carry out oil refining

Description

This NOS unit is about refining the oil using various methods as per organization standards.

Scope

The scope covers the following :

- Carry out degumming or neutralizing of oil
- Bleach the oil
- Carry out dewaxing/winterization of oil
- Carry out de-odourizing of oil
- Carry out post-production cleaning and regular maintenance of equipment

Elements and Performance Criteria

Carry out degumming or neutralizing of oil

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

- PC1.** arrange crude oil from the storage
- PC2.** prepare required chemicals as per work order
- PC3.**
 - set controls of the heat exchanger
 - Controls of heat exchanger: temperature, pressure, etc.
- PC4.** heat the oil to specified processing temperature
- PC5.** allow heated oil from heat exchanger to flow into centrifugal mixer by opening the valve
- PC6.** add measured quantities of acids (such as phosphoric or citric acid) and alkali solution (such as sodium hydroxide/caustic lye) in the defined sequence to carry out the neutralisation and acid-mixing process as per standard operating procedures (SOPs)
- PC7.**
 - set controls of the centrifuge to carry out separation of the non-hydratable gums and soap stock from oil
 - Controls: speed, time, etc.
- PC8.**
 - set controls of the heat exchanger and heat the oil after separation process
 - Controls: temperature, pressure, etc.
- PC9.** mix the hot water with oil for water washing process to remove residual gums
- PC10.** separate the neutralized oil and washed water
- PC11.** transfer neutralized oil to the collection tank
- PC12.**
 - set controls of the vacuum dryer and remove moisture from the neutralized oil under the vacuum
 - Controls: pressure, temperature, etc.

Bleach the oil

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

- PC13.**
 - set controls of the heat exchanger and heat and bleach the degummed and dried oil as per SOP
 - Controls: temperature, pressure, time, etc.

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- PC14.** • set controls of the bleacher and spray heated oil through nozzles into bleacher evenly
• Controls: pressure, temperature, retention time, etc.
- PC15.** remove any residual gums and soaps, colours, impurities, trace metals, etc., by bleaching earth
- PC16.** transfer dried oil and earth mixture into series of two pressure leaf filters to remove spent earth and collect filtered oil in filtrate receiver
- PC17.** polish the filtered oil and collect polished oil in bleached oil collection tank
- PC18.** remove residual oil and collect in recovered oil tank
- PC19.** perform quality check of spent earth residual oil to minimize losses
- PC20.** collect and dispose of spent bleaching earth safely as per environmental and organisational SOPs.

Carry out dewaxing/winterization of oil

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

- PC21.** • heat the oil to a specified temperature to liquify the oil
• Controls: temperature, pressure, flow rate, etc.
- PC22.** transfer heated oil to the storage tank
- PC23.** circulate cooling tower water to cool down the oil to certain temperature
- PC24.** circulate propylene glycol to gradually cool oil to required temperature as per SOP
- PC25.** • set controls of the agitator and agitate cooled oil at the specified speed for the specified time and temperature
• Controls: temperature, speed, etc.
- PC26.** remove precipitated solids and collect filtered oil (clear oil with sparkling appearance) in the storage tank
- PC27.** take sample of dewaxed oil and transfer it to the quality analysis lab

Carry out de-odourizing of oil

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

- PC28.** transfer bleached oil to economizer to pre-heat oil to the specified temperature by using outgoing hot de-odourized oil
- PC29.** • set controls of the economizer
• Controls of the economizer: temperature, time, etc.
- PC30.** create vacuum in the deaerator tank by pre-heating the oil to the specified temperature
- PC31.** • set controls of the de-odorizing economizer to remove free fatty acid and other volatile impurities from the oil along with steam
• Controls: temperature, pressure, retention time, etc.
- PC32.** cool down the de-odourized oil in the de-odourizing economizer in bleaching plant
- PC33.** cool down the oil to storage temperature by spraying water from cooling water tower
- PC34.** collect oil in refined oil storage tank
- PC35.** • check the quality of finished product (de-odourized oil) through physical parameters
• Physical parameters: colour, odour, viscosity, etc.
- PC36.** take sample and transfer it to the quality lab for the analysis
- PC37.** transfer refined oil into the filling tank of packaging machine
- PC38.** load packaging materials and labels in packaging machine
- PC39.** • set controls of the packaging, labeling, and date coding machines as per SOP
• Controls: filling volume, date coding, batch number, date of manufacture, date of expiry, etc.

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- PC40.** place the packed products in cartons and seal, and transfer them to the storage area and store as per SOP
- PC41.** add approved antioxidant to the refined oil, where applicable, before final filtration and packaging as per SOP
- PC42.** set controls in PLC for process parameters of each machinery, i.e., neutraliser, bleacher, crystalliser, de-odourizer
- PC43.**
- perform final processing of refined oil and package the refined oil in case of fully automated process by passing the crude oil continuously through respective equipment
 - Final process: neutralize/degum, bleach, dewax, de-odorize
 - Equipment: neutralizer, bleacher, crystallizer, de-odourizer
- PC44.** document and maintain accurate records of production activities, process parameters, and finished product details, including raw materials used, production sequence, equipment performance, process flow chart, batch numbers, packing time, manufacturing and expiry dates, labelling information, and other data required for traceability and audits as per organisational procedures.
- PC45.** verify documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits
- PC46.** report deviations or non-conformities to the supervisor and assist in implementing corrective actions

Carry out post-production cleaning and regular maintenance of equipment

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

- PC47.** clean the work area, machineries, equipment and tools using recommended cleaning agents and sanitizers
- PC48.** ensure periodic (daily/weekly/monthly/ quarterly/half yearly/annual) maintenance of all machines and equipment following the SOP or following suppliers' instructions/manuals

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** degumming or neutralizing process of the oil
- KU2.** usage of chemicals in degumming or neutralizing process
- KU3.** operating procedure of all machineries such as heat exchanger, centrifuge, bleaching heat exchanger, bleacher, thermal oil heater, economizer/ economizer, de-odourizer/pre-stripper, packaging, labelling, and date coding, etc.
- KU4.** procedure to carry out separation process of the crude oil
- KU5.** significance of removing moisture from the neutralized oil under the vacuum
- KU6.** sop to heat and bleach the degummed and dried oil
- KU7.** procedure to polish filtered oil
- KU8.** methods to liquify the oil
- KU9.** procedure to cool down the oil
- KU10.** techniques to circulate propylene glycol on oil to cool down it to the required temperature
- KU11.** how to agitate cooled oil
- KU12.** sop to take samples for quality analysis

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- KU13.** de-odourizing process of oil
- KU14.** pre-heating process of the oil along with the steam
- KU15.** procedure to remove impurities from the oil along with steam
- KU16.** physical parameters to check quality of the finished product
- KU17.** sop to report discrepancies/concerns to departments supervisor
- KU18.** procedure to perform post production cleaning and regular maintenance of equipments

Generic Skills (GS)

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

- GS1.** communicate effectively with team members, supervisors, and quality control personnel to ensure smooth coordination during oil refining operations and address any process deviations
- GS2.** read and interpret work orders, process flow charts, equipment manuals, and standard operating procedures (SOPs) related to degumming, bleaching, dewaxing, and deodorising operations
- GS3.** apply basic numeracy skills to measure and record quantities, temperatures, pressures, flow rates, and other process parameters accurately
- GS4.** plan and organise work activities efficiently to ensure the timely execution of refining, filtration, and packaging operations as per production schedules
- GS5.** demonstrate teamwork, time management, self-discipline, and responsibility to achieve production targets and maintain consistent quality of refined oil products

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out degumming or neutralizing of oil</i>	9	13	-	2
PC1. arrange crude oil from the storage	-	-	-	-
PC2. prepare required chemicals as per work order	-	-	-	-
PC3. • set controls of the heat exchanger • Controls of heat exchanger: temperature, pressure, etc.	-	-	-	-
PC4. heat the oil to specified processing temperature	-	-	-	-
PC5. allow heated oil from heat exchanger to flow into centrifugal mixer by opening the valve	-	-	-	-
PC6. add measured quantities of acids (such as phosphoric or citric acid) and alkali solution (such as sodium hydroxide/caustic lye) in the defined sequence to carry out the neutralisation and acid-mixing process as per standard operating procedures (SOPs)	-	-	-	-
PC7. • set controls of the centrifuge to carry out separation of the non-hydratable gums and soap stock from oil • Controls: speed, time, etc.	-	-	-	-
PC8. • set controls of the heat exchanger and heat the oil after separation process • Controls: temperature, pressure, etc.	-	-	-	-
PC9. mix the hot water with oil for water washing process to remove residual gums	-	-	-	-
PC10. separate the neutralized oil and washed water	-	-	-	-
PC11. transfer neutralized oil to the collection tank	-	-	-	-
PC12. • set controls of the vacuum dryer and remove moisture from the neutralized oil under the vacuum • Controls: pressure, temperature, etc.	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Bleach the oil</i>	6	8	-	1
PC13. • set controls of the heat exchanger and heat and bleach the degummed and dried oil as per SOP • Controls: temperature, pressure, time, etc.	-	-	-	-
PC14. • set controls of the bleacher and spray heated oil through nozzles into bleacher evenly • Controls: pressure, temperature, retention time, etc.	-	-	-	-
PC15. remove any residual gums and soaps, colours, impurities, trace metals, etc., by bleaching earth	-	-	-	-
PC16. transfer dried oil and earth mixture into series of two pressure leaf filters to remove spent earth and collect filtered oil in filtrate receiver	-	-	-	-
PC17. polish the filtered oil and collect polished oil in bleached oil collection tank	-	-	-	-
PC18. remove residual oil and collect in recovered oil tank	-	-	-	-
PC19. perform quality check of spent earth residual oil to minimize losses	-	-	-	-
PC20. collect and dispose of spent bleaching earth safely as per environmental and organisational SOPs.	-	-	-	-
<i>Carry out dewaxing/winterization of oil</i>	5	8	-	1
PC21. • heat the oil to a specified temperature to liquify the oil • Controls: temperature, pressure, flow rate, etc.	-	-	-	-
PC22. transfer heated oil to the storage tank	-	-	-	-
PC23. circulate cooling tower water to cool down the oil to certain temperature	-	-	-	-
PC24. circulate propylene glycol to gradually cool oil to required temperature as per SOP	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. <ul style="list-style-type: none"> set controls of the agitator and agitate cooled oil at the specified speed for the specified time and temperature Controls: temperature, speed, etc. 	-	-	-	-
PC26. remove precipitated solids and collect filtered oil (clear oil with sparkling appearance) in the storage tank	-	-	-	-
PC27. take sample of dewaxed oil and transfer it to the quality analysis lab	-	-	-	-
<i>Carry out de-odourizing of oil</i>	18	19	-	5
PC28. transfer bleached oil to economizer to pre-heat oil to the specified temperature by using outgoing hot de-odourized oil	-	-	-	-
PC29. <ul style="list-style-type: none"> set controls of the economizer Controls of the economizer: temperature, time, etc. 	-	-	-	-
PC30. create vacuum in the deaerator tank by pre-heating the oil to the specified temperature	-	-	-	-
PC31. <ul style="list-style-type: none"> set controls of the de-odorizing economizer to remove free fatty acid and other volatile impurities from the oil along with steam Controls: temperature, pressure, retention time, etc. 	-	-	-	-
PC32. cool down the de-odourized oil in the de-odourizing economizer in bleaching plant	-	-	-	-
PC33. cool down the oil to storage temperature by spraying water from cooling water tower	-	-	-	-
PC34. collect oil in refined oil storage tank	-	-	-	-
PC35. <ul style="list-style-type: none"> check the quality of finished product (de-odourized oil) through physical parameters Physical parameters: colour, odour, viscosity, etc. 	-	-	-	-
PC36. take sample and transfer it to the quality lab for the analysis	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC37. transfer refined oil into the filling tank of packaging machine	-	-	-	-
PC38. load packaging materials and labels in packaging machine	-	-	-	-
PC39. <ul style="list-style-type: none"> • set controls of the packaging, labeling, and date coding machines as per SOP • Controls: filling volume, date coding, batch number, date of manufacture, date of expiry, etc. 	-	-	-	-
PC40. place the packed products in cartons and seal, and transfer them to the storage area and store as per SOP	-	-	-	-
PC41. add approved antioxidant to the refined oil, where applicable, before final filtration and packaging as per SOP	-	-	-	-
PC42. set controls in PLC for process parameters of each machinery, i.e., neutraliser, bleacher, crystalliser, de-odourizer	-	-	-	-
PC43. <ul style="list-style-type: none"> • perform final processing of refined oil and package the refined oil in case of fully automated process by passing the crude oil continuously through respective equipment • Final process: neutralize/degum, bleach, dewax, deodorize • Equipment: neutralizer, bleacher, crystallizer, de-odourizer 	-	-	-	-
PC44. document and maintain accurate records of production activities, process parameters, and finished product details, including raw materials used, production sequence, equipment performance, process flow chart, batch numbers, packing time, manufacturing and expiry dates, labelling information, and other data required for traceability and audits as per organisational procedures.	-	-	-	-
PC45. verify documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC46. report deviations or non-conformities to the supervisor and assist in implementing corrective actions	-	-	-	-
<i>Carry out post-production cleaning and regular maintenance of equipment</i>	2	2	-	1
PC47. clean the work area, machineries, equipment and tools using recommended cleaning agents and sanitizers	-	-	-	-
PC48. ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual) maintenance of all machines and equipment following the SOP or following suppliers' instructions/manuals	-	-	-	-
NOS Total	40	50	-	10

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N1030
NOS Name	Carry out oil refining
Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing-Food Grain Milling (including oilseeds)
NSQF Level	4
Credits	5
Version	2.0
Last Reviewed Date	06/02/2026
Next Review Date	06/02/2029
NSQF Clearance Date	06/02/2026

Qualification Pack

FIC/N9906: Apply food safety guidelines in Food Processing

Description

This unit covers the essential components of food safety, Good Manufacturing Practices (GMP), and personal hygiene in the food industry. It emphasizes the importance of individuals working in the food industry in protecting the health and well-being of consumers by following food safety protocols and procedures and ensuring the production of safe and high-quality food products.

Scope

The scope covers the following :

- Apply personal hygiene and follow Good Manufacturing practices at the workplace.
- Implement Food Safety and pre-requisite programs (PRP) at the workplace.

Elements and Performance Criteria

Apply personal hygiene and follow Good Manufacturing practices at workplace

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

- PC1.** PC1. follow a site relevant documented procedure for Personal Hygiene and Visitor/ Contractor rules.
- PC2.** PC2. follow work instructions at levels of employees inside a food manufacturing site and ensure that the relevant instructions are well communicated and being followed at the fixed timelines.
- PC3.** PC3. ensure timely participate and carry out the relevant training and awareness sessions on personal hygiene, GMP, and related topics.
- PC4.** PC4. ensure timely medical examination from a prescribed and authorized doctor and comply with the guidelines of Schedule IV as described in Food Safety Standard Authority of India (FSSAI) guidelines.
- PC5.** PC5. fill in data in the daily monitoring checklist related to personal hygiene, food safety, and GMP.
- PC6.**
 - PC6. follow a site-relevant documented procedure and area-wise work instructions for Good Manufacturing Practices (GMP) to be followed on the site.
 - procedure: Hand washing requirements, Gowning & De gowning protocols, cleaning, and sanitation of employee lockers, follow the protocols as laid down in the different categories of processing areas like Low Risk, High Risk, High Care areas, etc.
- PC7.** PC7. follow all validated Do's & Don'ts inside a food manufacturing firm.
- PC8.** PC8. follow man and materials movement throughout the production facility, to restrict unwanted hazards to cross-contaminate the products which are being manufactured in the facility.
- PC9.** PC9. refer to the process flow charts, HACCP summary plan, and critical process parameters in each and respective areas of the production line.
- PC10.** PC10. identify the material requirements such as manufacturing equipments, Utensils, and other processing aids, cleaning chemicals, and cleaning work instructions in all the relevant areas of the manufacturing facility. Also, a special focus shall be given to Allergens and their risks. Wherever required, the allergen requirements shall be separately addressed.

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- PC11.** PC11. ensure to properly tag and number all the equipment, machinery, tools, and other processing aids to keep proper traceability of the product being manufactured and handled at the site.
- PC12.** PC12. follow and implement all training and awareness guidelines in the manufacturing area and regularly participate in training effectiveness for evaluation.
- PC13.** PC13. participate in audits and address the aspects of Good Manufacturing Procedures, personal hygiene, and food safety.
- PC14.** PC14. ensure the record keeping and documentation such as Daily Monitoring Sheets, Batch Traceability Records, machine records, product parameters, process control parameters, etc.

Implement food safety practices at the workplace

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

- PC15.** PC15. maintain updated facilities, equipment, and tool and design requirements to minimize the risks associated with the products being handled at the site.
- PC16.** PC16. follow the instruction in the raw and packaging materials warehouse and ensure receiving material parameters match all the laid requirements. parameters: Incoming vehicles Visual report, storage, and handling requirements, hazardous and non-hazardous goods, allergens, cross-contamination risks, Quarantine, Accepted & rejected goods, monitoring temperature and humidity, etc.
- PC17.** PC17. follow FSSAI Schedule IV requirements related to Pest Control, Cleaning, and Sanitation, Utilities, Waste Disposal, Prevention of Cross-Contamination, allergen management, corrective action, preventive actions, food operation control etc.
- PC18.** PC18. ensure timely check of the critical control points and product parameters.
- PC19.** PC19. record keeping and documentation such as daily monitoring sheets, cleaning sheets, parameters, etc.
- PC20.** PC20. report any food safety and GMP issue to the supervisor, if any.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** importance of personal hygiene, GMP, visitors & contractor's rules. Associated risk in case of deviation from the standard policies and how the requirement is linked with the site's FSSAI License.
- KU2.** KU2. importance of training and work instruction delivered by the supervisors.
- KU3.** KU3. importance of filling the records and checklists, formats and how to ensure that the timely and effective completion is achieved.
- KU4.** KU4. knowledge of trainings and skills required to perform in food processing premises.
- KU5.** KU5. understand FSSAI Schedule IV requirements of food handlers and PRPs within the processing area
- KU6.** KU6. importance of timely medical examinations and awareness of communicable diseases
- KU7.** Understanding of Do's & Don'ts, intellect mindset to understand the visual illustrations
- KU8.** KU8. understanding about Site Zoning plans.
- KU9.** KU9. awareness of layout which would help to demarcate the defined movements of RM, PM, FG, and wastes generated during the processing of goods. This one lays a framework to launch Good Manufacturing Practices (GMP) successfully and effectively on site.

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- KU10.** KU10. understand the manufacturing process, product parameters and process control parameters such as CCPs
- KU11.** KU11. understanding about Hazard Analysis and Critical Control Points (HACCP)
- KU12.** KU12. understanding about Allergens and their types and controls to monitor effective handling of allergen raw materials on site.
- KU13.** KU13. basic understanding of traceability and mock recall
- KU14.** KU14. awareness about Internal & external Audits
- KU15.** KU15. understanding for RCA CAPA, cleaning and sanitation
- KU16.** KU16. awareness about record keeping and data monitoring in various sheets as per organizational requirement

Generic Skills (GS)

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

- GS1.** GS1. read and comprehend basic content to read labels, charts, signages, symbols and product manuals
- GS2.** GS2. communicate with coworkers appropriately to clarify instructions and other issues
- GS3.** GS3. plan and organize the work schedule, work area, tools, equipment, and materials for improved productivity
- GS4.** GS4. plan and prioritize tasks as per work requirements
- GS5.** GS5. always be punctual and courteous
- GS6.** GS6. good observations and intellect mindset

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Apply personal hygiene and follow Good Manufacturing practices at workplace</i>	22	44	-	6
PC1. PC1. follow a site relevant documented procedure for Personal Hygiene and Visitor/ Contractor rules.	2	4	-	-
PC2. PC2. follow work instructions at levels of employees inside a food manufacturing site and ensure that the relevant instructions are well communicated and being followed at the fixed timelines.	2	4	-	2
PC3. PC3. ensure timely participate and carry out the relevant training and awareness sessions on personal hygiene, GMP, and related topics.	2	4	-	-
PC4. PC4. ensure timely medical examination from a prescribed and authorized doctor and comply with the guidelines of Schedule IV as described in Food Safety Standard Authority of India (FSSAI) guidelines.	2	4	-	-
PC5. PC5. fill in data in the daily monitoring checklist related to personal hygiene, food safety, and GMP.	2	4	-	-
PC6. <ul style="list-style-type: none"> PC6. follow a site-relevant documented procedure and area-wise work instructions for Good Manufacturing Practices (GMP) to be followed on the site. procedure: Hand washing requirements, Gowning & De gowning protocols, cleaning, and sanitation of employee lockers, follow the protocols as laid down in the different categories of processing areas like Low Risk, High Risk, High Care areas, etc. 	2	4	-	2
PC7. PC7. follow all validated Do's & Don'ts inside a food manufacturing firm.	1	2	-	1
PC8. PC8. follow man and materials movement throughout the production facility, to restrict unwanted hazards to cross-contaminate the products which are being manufactured in the facility.	2	4	-	-
PC9. PC9. refer to the process flow charts, HACCP summary plan, and critical process parameters in each and respective areas of the production line.	1	2	-	1

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. PC10. identify the material requirements such as manufacturing equipments, Utensils, and other processing aids, cleaning chemicals, and cleaning work instructions in all the relevant areas of the manufacturing facility. Also, a special focus shall be given to Allergens and their risks. Wherever required, the allergen requirements shall be separately addressed.	2	4	-	-
PC11. PC11. ensure to properly tag and number all the equipment, machinery, tools, and other processing aids to keep proper traceability of the product being manufactured and handled at the site.	1	2	-	-
PC12. PC12. follow and implement all training and awareness guidelines in the manufacturing area and regularly participate in training effectiveness for evaluation.	1	2	-	-
PC13. PC13. participate in audits and address the aspects of Good Manufacturing Procedures, personal hygiene, and food safety.	1	2	-	-
PC14. PC14. ensure the record keeping and documentation such as Daily Monitoring Sheets, Batch Traceability Records, machine records, product parameters, process control parameters, etc.	1	2	-	-
<i>Implement food safety practices at the workplace</i>	8	16	-	4
PC15. PC15. maintain updated facilities, equipment, and tool and design requirements to minimize the risks associated with the products being handled at the site.	2	4	-	-
PC16. PC16. follow the instruction in the raw and packaging materials warehouse and ensure receiving material parameters match all the laid requirements. parameters: Incoming vehicles Visual report, storage, and handling requirements, hazardous and non-hazardous goods, allergens, cross-contamination risks, Quarantine, Accepted & rejected goods, monitoring temperature and humidity, etc.	1	2	-	1

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC17. PC17. follow FSSAI Schedule IV requirements related to Pest Control, Cleaning, and Sanitation, Utilities, Waste Disposal, Prevention of Cross-Contamination, allergen management, corrective action, preventive actions, food operation control etc.	2	4	-	2
PC18. PC18. ensure timely check of the critical control points and product parameters.	1	2	-	-
PC19. PC19. record keeping and documentation such as daily monitoring sheets, cleaning sheets, parameters, etc.	1	2	-	1
PC20. PC20. report any food safety and GMP issue to the supervisor, if any.	1	2	-	-
NOS Total	30	60	-	10

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9906
NOS Name	Apply food safety guidelines in Food Processing
Sector	Food Processing
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	1
Version	1.0
Last Reviewed Date	06/02/2026
Next Review Date	06/02/2029
NSQC Clearance Date	06/02/2026

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:

PC5. follow good manners while communicating with others

PC6. work with others in a team

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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

KU7. inclusivity and its importance

KU8. different types of disabilities and appropriate communication and behaviour towards PwD

KU9. different types of financial products and services

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- 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

Qualification Pack

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	-	-	-	-

Qualification Pack

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	06/02/2026
Next Review Date	06/02/2029
NSQC Clearance Date	06/02/2026

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down the proportion of marks for Theory and Skills Practical for each PC.

The assessment for the theory part will be based on the knowledge bank of questions created by the SSC.

Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.

Individual assessment agencies will create unique question papers for the theory part for each candidate at each examination/training centre (as per assessment criteria below).

Qualification Pack

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

To pass the Qualification Pack assessment, every trainee should score a minimum of 70% of % the aggregate marks to successfully clear the assessment.

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/N9026.Prepare for production	30	70	-	-	100	10
FIC/N1029.Carry out oil extraction	40	50	-	10	100	30
FIC/N1030.Carry out oil refining	40	50	-	10	100	30
FIC/N9906.Apply food safety guidelines in Food Processing	30	60	-	10	100	20
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
Total	160	260	-	30	450	100

Qualification Pack

Acronyms

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

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.
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.

Qualification Pack

Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
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Qualification Pack

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Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge & Understanding (KU)	Knowledge and Understanding (KU) are statements that together specify, the technical, generic, professional, and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers has of their relevant areas of responsibility.
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