Qualification Pack

Fruit Pulp Junior Processor

Electives: Squash and Juice / Jam, Jelly and Ketchup

QP Code: FIC/Q0106

Version: 5.0

NSQF Level: 3

Food Industry Capacity & Skill Initiative || Shriram Bharatiya Kala kendra, 3rd floor, 1, Copernicus Marg, Mandi House, New Delhi
Delhi 110001 || email:Shikha@ficsi.in

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FIC/Q0106: Fruit Pulp Junior Processor

Brief Job Description

The Fruit Pulp Junior Processor is responsible for handling and processing a variety of fruits to produce high-quality fruit-based products. This role involves overseeing the entire production process, from raw material preparation to the storage of finished products, ensuring adherence to quality and safety standards.

Personal Attributes

The individual must be physically fit, detail-oriented, and able to plan, prioritize, and work under pressure. Strong coordination, basic mechanical knowledge, and adherence to safety and hygiene standards are essential, along with time management, teamwork, and communication skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. FIC/N9026: Prepare for production
2. FIC/N0122: Produce fruit pulp from various fruits
3. FIC/N9906: Apply food safety guidelines in Food Processing
4. DGT/VSQ/N0101: Employability Skills (30 Hours)

Electives*(mandatory to select at least one):*

Elective 1: Squash and Juice

This elective is about production of squash and juice.

1. FIC/N0103: Produce Squash and Juice

Elective 2: Jam, Jelly and Ketchup

This elective is about production of jam, jelly and ketchup

1. FIC/N0111: Produce jam, jelly and ketchup

Qualification Pack (QP) Parameters

Qualification Pack

Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing-Fruits and Vegetables
Country	India
NSQF Level	3
Credits	15
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8160.2300,2400
Minimum Educational Qualification & Experience	10th grade pass OR 8th grade pass with 3 Years of experience in Food Industry OR Previous relevant Qualification of NSQF Level 2 with 3 Years of experience in Food Industry OR Previous relevant Qualification of NSQF Level 2.5 with 1.5 years of experience in Food Industry
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NA
Minimum Job Entry Age	16 Years
Last Reviewed On	NA
Next Review Date	08/05/2028
NSQC Approval Date	08/05/2025
Version	5.0
Reference code on NQR	QG-03-FI-03997-2025-V3-FICSI
NQR Version	3.0

Remarks:

Nil

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)

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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Plan for production	**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	-	-
Clean and maintain work area, machineries, and tools for production	**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	-	-
Organize for production	**5**	**13**	**-**	**-**
PC11. organize tools and equipment	2	7	-	-

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**	**-**	**-**

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	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025

FIC/N0122: Produce fruit pulp from various fruits

Description

This unit covers the automated production of fruit pulp using SCADA, PLC-controlled systems, optical sorting, and automated peeling and de-seeding. It ensures quality, food safety, and efficiency while optimizing pulp for canning or further processing into juices, jams, jellies, and ketchup.

Scope

The scope covers the following :

- Wash and sort the fruits
- Peel, de-seed, or de-stone the fruits
- Perform fruit pulp extraction and pre-cooking activities
- Utilize fruit pulp for further processing
- Carry out aseptic sterilization and packing of fruit pulp
- Can the fruit pulp
- Perform post-production cleaning and equipment maintenance

Elements and Performance Criteria

Wash and sort the fruits

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

PC1. dump fruits into the washing tank to remove dirt, soil, dust, and unwanted sticky material

PC2. transfer fruits from the washing tank to the washing line conveyor using a ladder conveyor

PC3. rinse fruits with a high-pressure spraying system

PC4. inspect and sort fruits using an optical sorting machine for faster and more accurate defect detection

PC5. ensure that damaged, blemished, and rotten fruits are removed automatically using the sorting system

PC6. maintain records of washing, sorting, and rejected fruits for traceability

Peel, de-seed, or de-stone the fruits

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

PC7. load sorted fruits into an automated peeling and de-seeding machine for efficient processing and reduced manual intervention

PC8. ensure complete removal of peel or core using calibrated equipment and minimize wastage.

PC9. wash peeled fruits with pump water or an open spraying system, following food safety regulations.

PC10. observe the output from peeling/coring and manually check for any leftover peel or core residues

PC11. dispose of or further process the peeled material/core separately, as per organizational standards and sustainability guidelines

PC12. cut fruits to the required size manually or using an automated chopper/cutter/slicer machine for uniformity and consistency

PC13. perform random sampling to ensure size consistency and proper removal of inedible parts

PC14. maintain logbooks and quality records for peeling, coring, and slicing activities

Perform fruit pulp extraction and pre-cooking activities

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

PC15. extract fruit pulp using high-efficiency automated pulpers and refiners.

PC16. collect the refined pulp in an automated collection tank.

PC17. inspect pulp to ensure it is free from seeds and fibers

PC18. replace damaged or clogged filter screens in the pulper cum finisher machine to maintain efficiency

PC19. transfer the measured quantity of pulp into a steam-jacketed kettle/pre-cooking tank for controlled cooking

PC20. set and monitor control parameters such as pressure, temperature, cooking time, and stirrer speed using PLC (Programmable Logic Controller) for precision

PC21. check pulp consistency through texture analysis and measure Brix levels using a refractometer

PC22. transfer the pre-cooked pulp into a de-aeration tank and then to a continuous evaporator for concentration

PC23. send pulp samples to the quality lab for analysis as per FSSAI standards (Brix, pH, titratable acidity, etc.)

Utilize fruit pulp for further processing

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

PC24. use processed pulp for manufacturing RTS beverages, fruit juices, concentrates, and syrups

PC25. ensure compliance with FSSAI product-specific standards: RTS Beverages: minimum 10% fruit content, Fruit Juices: 100% pure juice with no added sugar, Squashes/Syrups: minimum 25% fruit content, Sauces: minimum 8% fruit content, Ketchup: minimum 25% fruit content

PC26. mix sugar, acidulants, stabilizers, and natural flavor enhancers as per recipe specifications

PC27. conduct sensory evaluation (taste, aroma, mouthfeel, appearance) and viscosity tests to ensure the final product meets quality parameters before further processing

Carry out aseptic sterilization and packing of fruit pulp

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

PC28. transfer pre-cooked/de-aerated/concentrated pulp into an automated sterilization system before aseptic packing

PC29. perform sterilization using SCADA (Supervisory Control and Data Acquisition) and PLC-based control systems for precise temperature and pressure adjustments

PC30. maintain steam pressure and temperature in the sterilization process as per SOP

PC31. ensure the aseptic surge tank maintains temperature until the pulp is filled

PC32. place plastic liners in containers such as drums and cartons

PC33. ensure labeling details (manufacturing date, expiry date, batch code, etc.) are printed accurately before filling

PC34. automate the filling process using sterile closures and filling machines to reduce contamination risks

PC35. transfer filled aseptic bags to the storage area, ensuring proper temperature control

Can the fruit pulp

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

PC36. operate automated canning machines equipped with SCADA and PLC for consistent and efficient filling

PC37. inspect and remove defective/damaged cans using automated vision inspection systems

PC38. sterilize empty cans using automated retort sterilization to enhance food safety and shelf life

PC39. transfer pre-cooked/pre-heated pulp into the filling tank and adjust settings for temperature, volume, and agitator speed

PC40. seal cans using automated seamers for an airtight closure

PC41. load sealed cans into sterilization chambers and apply retort sterilization for extended shelf life

PC42. cool sterilized cans using an automated water-cooling system and dry them thoroughly before storage

PC43. perform leakage tests using automated pressure testing equipment and remove compromised cans

PC44. pack labeled cans into cartons using automated carton packaging systems and ensure proper stacking in the storage area

Perform post-production cleaning and equipment maintenance

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

PC45. clean work area, machinery, equipment, and tools using CIP (Clean-in-Place) automated sanitization systems

PC46. attend minor repairs/faults of machines and report major issues for automated system diagnostics and maintenance

PC47. ensure SCADA/PLC systems are regularly updated and calibrated for optimum performance

PC48. conduct periodic maintenance (daily/weekly/monthly/quarterly/annual) as per manufacturer's guidelines for all automated machines

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. procedure to receive and check fruits from the supplier/vendor for quality and quantity

KU2. physical parameters such as appearance, color, texture, and maturity to check the quality of the fruit

KU3. methods to monitor the temperature of the fruits to be cooled to the required temperature

KU4. operating procedures for ventilation systems, ladder conveyors, chopper/cutter/slicer machines, aseptic packaging machinery, and canning machinery

KU5. standard Operating Procedures (SOPs) for washing fruits, including automated washing systems, manual washing procedures, and inspection of washed fruits for quality

KU6. procedures for cutting fruits manually or using automated slicers/choppers, disposing of waste, and replacing damaged or clogged filter screens of pulper cum finisher/pulper refiner machines

KU7. processes for transferring products for quality lab analysis, sending filled aseptic bags or cans to automated storage and retrieval systems, and storing raw materials, packaging materials, and finished goods in temperature-controlled automated warehouses

KU8. visual inspection procedure for manually washed fruits

KU9. peel/core removal process of the fruits, including the use of automated peeling and de-seeding machines for higher efficiency

KU10. basics and concepts of fruit pulp extraction, including the integration of automated systems like SCADA and PLC for process control

KU11. process to collect refined fruit pulp into collection tanks, ensuring automated transfer for consistency and hygiene

KU12. methods to examine pre-cooked fruit pulp for quality assessment

KU13. aseptic packaging process and parameters, incorporating automated filling and sealing mechanisms

KU14. procedure to monitor and maintain steam pressure for processing and sterilization

KU15. canning process and parameters, including automated canning and sealing processes

KU16. process of filling pulp into cans using automated filling systems for improved accuracy and reduced manual handling

KU17. types and categories of packaging materials, and automated packaging machinery for efficiency and consistency

KU18. post-production cleaning and maintenance procedures of the production equipment, including CIP (Clean-in-Place) automation

KU19. quality parameters, basic food microbiology, and quality assessment based on physical parameters

KU20. use of optical sorting machines for faster and more accurate fruit sorting

KU21. sanitizers and disinfectants, along with their handling and storage procedures

KU22. organizational and FSSAI laws and regulations on product, packaging, and labeling

KU23. importance of retort sterilization for improved product safety and extended shelf life

Generic Skills (GS)

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

GS1. record instructions from supervisors, raw materials used, finished products, process read-ings, and observations for process charts

GS2. read and interpret equipment manuals, process documents, and internal communications for operational understanding

GS3. write information documents to internal departments/ internal teams

GS4. plan, prioritize, and sequence work operations

GS5. communicate effectively with the team members, senior/supervisor, and other depart-ments

GS6. discuss task lists, schedules, and activities with the senior/supervisor

GS7. analyse critical points in day-to-day tasks through experience and observation and identify control measures to solve the issue

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Wash and sort the fruits	**3**	**6**	**-**	**3**
PC1. dump fruits into the washing tank to remove dirt, soil, dust, and unwanted sticky material	0.5	1	-	0.5
PC2. transfer fruits from the washing tank to the washing line conveyor using a ladder conveyor	0.5	1	-	0.5
PC3. rinse fruits with a high-pressure spraying system	0.5	1	-	0.5
PC4. inspect and sort fruits using an optical sorting machine for faster and more accurate defect detection	0.5	1	-	0.5
PC5. ensure that damaged, blemished, and rotten fruits are removed automatically using the sorting system	0.5	1	-	0.5
PC6. maintain records of washing, sorting, and rejected fruits for traceability	0.5	1	-	0.5
Peel, de-seed, or de-stone the fruits	**4**	**8**	**-**	**3**
PC7. load sorted fruits into an automated peeling and de-seeding machine for efficient processing and reduced manual intervention	0.5	1	-	0.5
PC8. ensure complete removal of peel or core using calibrated equipment and minimize wastage.	0.5	1	-	0.5
PC9. wash peeled fruits with pump water or an open spraying system, following food safety regulations.	0.5	1	-	-
PC10. observe the output from peeling/coring and manually check for any leftover peel or core residues	0.5	1	-	0.5
PC11. dispose of or further process the peeled material/core separately, as per organizational standards and sustainability guidelines	0.5	1	-	-
PC12. cut fruits to the required size manually or using an automated chopper/cutter/slicer machine for uniformity and consistency	0.5	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. perform random sampling to ensure size consistency and proper removal of inedible parts	0.5	1	-	0.5
PC14. maintain logbooks and quality records for peeling, coring, and slicing activities	0.5	1	-	0.5
Perform fruit pulp extraction and pre-cooking activities	**7**	**10**	**-**	**3**
PC15. extract fruit pulp using high-efficiency automated pulpers and refiners.	1	2	-	0.5
PC16. collect the refined pulp in an automated collection tank.	1	1	-	0.5
PC17. inspect pulp to ensure it is free from seeds and fibers	1	1	-	0.5
PC18. replace damaged or clogged filter screens in the pulper cum finisher machine to maintain efficiency	0.5	1	-	-
PC19. transfer the measured quantity of pulp into a steam-jacketed kettle/pre-cooking tank for controlled cooking	1	1	-	0.5
PC20. set and monitor control parameters such as pressure, temperature, cooking time, and stirrer speed using PLC (Programmable Logic Controller) for precision	0.5	1	-	0.5
PC21. check pulp consistency through texture analysis and measure Brix levels using a refractometer	1	1	-	-
PC22. transfer the pre-cooked pulp into a de-aeration tank and then to a continuous evaporator for concentration	0.5	1	-	0.5
PC23. send pulp samples to the quality lab for analysis as per FSSAI standards (Brix, pH, titratable acidity, etc.)	0.5	1	-	-
Utilize fruit pulp for further processing	**2**	**4**	**-**	**2**
PC24. use processed pulp for manufacturing RTS beverages, fruit juices, concentrates, and syrups	0.5	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. ensure compliance with FSSAI product-specific standards: RTS Beverages: minimum 10% fruit content, Fruit Juices: 100% pure juice with no added sugar, Squashes/Syrups: minimum 25% fruit content, Sauces: minimum 8% fruit content, Ketchup: minimum 25% fruit content	0.5	1	-	0.5
PC26. mix sugar, acidulants, stabilizers, and natural flavor enhancers as per recipe specifications	0.5	1	-	0.5
PC27. conduct sensory evaluation (taste, aroma, mouthfeel, appearance) and viscosity tests to ensure the final product meets quality parameters before further processing	0.5	1	-	0.5
Carry out aseptic sterilization and packing of fruit pulp	**5**	**8**	**-**	**3**
PC28. transfer pre-cooked/de-aerated/concentrated pulp into an automated sterilization system before aseptic packing	1	1	-	0.5
PC29. perform sterilization using SCADA (Supervisory Control and Data Acquisition) and PLC-based control systems for precise temperature and pressure adjustments	1	1	-	0.5
PC30. maintain steam pressure and temperature in the sterilization process as per SOP	0.5	1	-	-
PC31. ensure the aseptic surge tank maintains temperature until the pulp is filled	0.5	1	-	0.5
PC32. place plastic liners in containers such as drums and cartons	0.5	1	-	-
PC33. ensure labeling details (manufacturing date, expiry date, batch code, etc.) are printed accurately before filling	0.5	1	-	0.5
PC34. automate the filling process using sterile closures and filling machines to reduce contamination risks	0.5	1	-	0.5
PC35. transfer filled aseptic bags to the storage area, ensuring proper temperature control	0.5	1	-	0.5
Can the fruit pulp	**7**	**10**	**-**	**4**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC36. operate automated canning machines equipped with SCADA and PLC for consistent and efficient filling	1	2	-	0.5
PC37. inspect and remove defective/damaged cans using automated vision inspection systems	1	1	-	0.5
PC38. sterilize empty cans using automated retort sterilization to enhance food safety and shelf life	0.5	1	-	0.5
PC39. transfer pre-cooked/pre-heated pulp into the filling tank and adjust settings for temperature, volume, and agitator speed	1	1	-	0.5
PC40. seal cans using automated seamers for an airtight closure	0.5	1	-	0.5
PC41. load sealed cans into sterilization chambers and apply retort sterilization for extended shelf life	0.5	1	-	-
PC42. cool sterilized cans using an automated water-cooling system and dry them thoroughly before storage	0.5	1	-	0.5
PC43. perform leakage tests using automated pressure testing equipment and remove compromised cans	1	1	-	0.5
PC44. pack labeled cans into cartons using automated carton packaging systems and ensure proper stacking in the storage area	1	1	-	0.5
Perform post-production cleaning and equipment maintenance	**2**	**4**	**-**	**2**
PC45. clean work area, machinery, equipment, and tools using CIP (Clean-in-Place) automated sanitization systems	0.5	1	-	0.5
PC46. attend minor repairs/faults of machines and report major issues for automated system diagnostics and maintenance	0.5	1	-	0.5
PC47. ensure SCADA/PLC systems are regularly updated and calibrated for optimum performance	0.5	1	-	0.5
PC48. conduct periodic maintenance (daily/weekly/monthly/quarterly/annual) as per manufacturer's guidelines for all automated machines	0.5	1	-	0.5

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	**30**	**50**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N0122
NOS Name	Produce fruit pulp from various fruits
Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing-Fruits and Vegetables
NSQF Level	3
Credits	7
Version	4.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025

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.

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.

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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Apply personal hygiene and follow Good Manufacturing practices at workplace	**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. • 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

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	-	-
Implement food safety practices at the workplace	**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

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**

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	18/02/2025
Next Review Date	18/02/2028
NSQC Clearance Date	18/02/2025

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

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

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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	**1**	**1**	**-**	**-**
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
Constitutional values – Citizenship	**1**	**1**	**-**	**-**
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	**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.	-	-	-	-
Basic English Skills	**2**	**3**	**-**	**-**
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
Communication Skills	**1**	**1**	**-**	**-**
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
Diversity & Inclusion	**1**	**1**	**-**	**-**
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
Financial and Legal Literacy	**3**	**4**	**-**	**-**
PC9. use various financial products and services safely and securely	-	-	-	-

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	-	-	-	-
Essential Digital Skills	**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	-	-	-	-
Entrepreneurship	**3**	**5**	**-**	**-**
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
Customer Service	**2**	**2**	**-**	**-**
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	**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**	**-**	**-**

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	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025

FIC/N0103: Produce Squash and Juice

Description

This unit is about producing fruit juice and squash as per the applicable food safety standards.

Scope

The scope covers the following :

- Receive, wash, sort and slice fruits
- Extract fruit juice
- Pasteurize fruit juice
- Clarify fruit juice
- Prepare squash
- Fill, pack and store juice and squash
- Carry out the post production activities

Elements and Performance Criteria

Receive, wash, sort and slice fruits

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

PC1. check the weight and quality of the fruits received from the supplier/vendor based on appearance, colour, texture, maturity, etc.

PC2. wash fruits using water to remove dirt, soil and other impurities from fruits

PC3. rinse fruits by spraying fresh water on them at the recommended pressure

PC4. examine and remove damaged, blemished and rotten fruits, and dispose of them following the standard procedure

PC5. cut/grate fruits to the required size and collect the sliced/grated fruits hygienically for further processing

Extract fruit juice

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

PC6. prepare fruits by sorting and removing stems, peels, and seeds, as appropriate for fruit types such as grapes, berries, citrus, apples, and pears

PC7. • process fruits using suitable methods such as grating, crushing, or pressing to extract juice, ensuring hygiene and minimal nutrient loss.
• - use manual or mechanical pressing for soft fruits like grapes and berries.
• - use citrus juicers (manual or electric) for oranges, lemons, etc., after peeling and de-seeding.
• - grate or pulp hard fruits like apples and pears, followed by pressing to extract juice.

PC8. apply appropriate enzymes in correct quantities and durations to improve juice extraction efficiency, based on the fruit type and processing method.

PC9. filter and collect the extracted juice to remove pulp and suspended particles, ensuring clarity and proper texture.

PC10. assess the final juice quality based on appearance, colour, consistency, flavour, and taste, ensuring it meets standard specifications. collect the extracted citrus juice, maintaining hygiene

Pasteurize fruit juice

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

PC11. concentrate fruit juice and recover aroma

PC12. pasteurize fruit juice at the recommended temperature and other process parameters

PC13. cool the pasteurized juice to the required temperature

PC14. collect the pasteurized juice, ensuring hygiene

Clarify fruit juice

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

PC15. determine the quantity of enzymes required for the clarification of juice, based on the formulation chart

PC16. add the required quantity of enzymes to the pasteurized juice

PC17. identify and remove the smallest particles from enzyme-treated juice to obtain clear juice

PC18. check the quality of juice based on colour, appearance, flavour, taste, etc.

PC19. prepare juice samples and coordinate their quality analysis with the quality-testing lab to ensure conformance to the applicable standards

PC20. store the processed juice at the recommended temperature and humidity until packaging or further processing

Prepare squash

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

PC21. prepare sugar syrup using the recommended quantity of sugar and permitted acids

PC22. maintain the recommended pressure and temperature for the appropriate duration to heat the syrup

PC23. check the quality of sugar syrup to ensure conformance to the applicable specifications and standards

PC24. filter the sugar syrup to remove undesirable particles and sediments

PC25. blend the recommended quantity of juice concentrate/ clarified juice, water, sugar syrup, acids, preservatives, colour, flavour at the appropriate mixing speed and duration

PC26. collect squash sample and check for uniform mixing

PC27. pasteurize the squash blend at the recommended pressure, temperature and process parameters

PC28. cool the pasteurized squash following the appropriate method

PC29. check the quality of pasteurized squash based on appearance, colour, consistency, flavour, taste etc.

PC30. sample squash and coordinate with the quality-testing lab for the quality analysis of squash to ensure conformance to the applicable quality standards

Fill, pack and store juice and squash

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

PC31. transfer the finished product into the filling tank of the packing machine up to the recommended level

PC32. load the packing materials in the packaging machine, sealing materials in the sealing machine, and labels in the labelling machine, Packing material: Tetra packs, glass bottles, plastic containers, etc.

PC33. set the appropriate filling volume on the filling machine according to the company standards

PC34. set the date coding machine with the batch number, manufacturing date, expiry date, etc.

PC35. carry out packing, sealing and labelling of juice and squash following the applicable procedure

PC36. check the weight of the packed product periodically to ensure conformance to the applicable standards

PC37. attach straw in the packaging of packed products

PC38. store the packed and labelled products in storage area under the appropriate conditions, using the relevant storage accessories

PC39. report discrepancies/concerns to the department supervisor for immediate action

Carry out post production activities

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

PC40. clean the work area, tools, equipment and machinery using the approved cleaning agents and sanitizers

PC41. follow the Clean-in-Place (CIP) and Clean-out-of-Place (COP) procedures

PC42. carry out basic repair and maintenance of the tools, equipment and machinery

PC43. follow the maintenance schedule and procedure for the tools, equipment and machinery in the manuals provided by the manufacturer

PC44. collect and dispose of the waste generated during fruit juice extraction and squash production

PC45. carry out appropriate documentation concerning the fruit juice extraction and squash production

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the applicable food safety and hygiene standards

KU2. the varieties of raw materials used for fruit juice and squash production

KU3. the fruit juice and squash production processes

KU4. the use of modern equipment for fruit juice extraction and squash production, such as fruit washer, fruit sorting machine, peeling machine, fruit slicer/ dicer, fruit crusher/ pulper, belt press, hydraulic press, centrifugal juicer, pulper/finisher, refiner, plate heat exchang-er, tubular heat exchanger, UV sterilizers, mixing tanks, homogenizers, bottle fillers, can filler, aseptic filling machine, capping machine, labelling machine, cooling tunnels, refrig-erated storage, refractometer

KU5. the benefits of automation in the food processing industry

KU6. the use of relevant tools for manual fruit juice extraction and squash production, such as hydraulic juice press, lever-operated citrus press, hand-crank crusher, commercial-grade masticating juicer, basket press, heavy-duty slicer/dicer, heavy-duty mortar and pestle, commercial-grade strainers, industrial cheesecloth, stainless steel mixing tank, large stain-less steel kettles, large funnels, stainless steel or food-grade plastic containers, gravity-fed or piston-operated fillers, manual

KU7. the basic maintenance and troubleshooting for the relevant tools equipment and machinery used in fruit juice extraction and squash production, including preventive maintenance

KU8. the process of aroma stripping during fruit juice production

KU9. the importance of ensuring the efficiency of pasteurization for food safety and quality

KU10. the methods to evaluate pasteurization effectiveness, including enzyme activity tests, microbiological testing, monitoring Hydroxymethylfurfural (HMF) levels, and rigorous time and temperature monitoring

KU11. the new technologies relevant to fruit juice extraction and squash production, such as Centrifugal Juicers, Ultrasonic juice Extraction, Membrane Filtration Systems, Supercritical CO2 Extraction, High-Pressure Processing (HPP), Vacuum Evaporation, Ultrasonic Homoge-nizers, etc.

KU12. the aseptic packaging process and parameters

KU13. the handling of aseptic packaging machineries

KU14. the procedure for the disposal of waste generated during fruit juice and squash production

KU15. the parameters for assessing the quality of commercially produced fruit juice and squash

KU16. the types and categories of packaging materials used in fruit juice and squash production

KU17. the use of relevant packing, sealing and labelling machineries

KU18. the applicable packing, sealing and labelling requirements, regulations and standards

KU19. the storage requirements and procedures for fruit juice and squash raw materials, packaging materials and products

KU20. the Clean-in-Place (CIP) and Clean-out-of-Place (COP) procedures

KU21. the safe use and storage of the relevant sanitizers and disinfectants

KU22. the applicable documentation requirements

Generic Skills (GS)

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

GS1. maintain work-related notes and records

GS2. read the relevant guides and literature to get the latest information about the field of work

GS3. communicate clearly and politely

GS4. perform basic calculations

GS5. listen attentively to understand the instructions being given

GS6. identify solutions to work-related issues

GS7. plan and prioritise tasks to ensure timely completion

GS8. make quick decisions in case of an emergency/ accident

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Receive, wash, sort and slice fruits	**3**	**5**	**-**	**2**
PC1. check the weight and quality of the fruits received from the supplier/vendor based on appearance, colour, texture, maturity, etc.	0.5	1	-	0.5
PC2. wash fruits using water to remove dirt, soil and other impurities from fruits	0.5	1	-	-
PC3. rinse fruits by spraying fresh water on them at the recommended pressure	0.5	1	-	0.5
PC4. examine and remove damaged, blemished and rotten fruits, and dispose of them following the standard procedure	0.5	1	-	0.5
PC5. cut/grate fruits to the required size and collect the sliced/grated fruits hygienically for further processing	1	1	-	0.5
Extract fruit juice	**5**	**9**	**-**	**4**
PC6. prepare fruits by sorting and removing stems, peels, and seeds, as appropriate for fruit types such as grapes, berries, citrus, apples, and pears	1	2	-	1
PC7. • process fruits using suitable methods such as grating, crushing, or pressing to extract juice, ensuring hygiene and minimal nutrient loss. • - use manual or mechanical pressing for soft fruits like grapes and berries. • - use citrus juicers (manual or electric) for oranges, lemons, etc., after peeling and de-seeding. • - grate or pulp hard fruits like apples and pears, followed by pressing to extract juice.	1	2	-	1
PC8. apply appropriate enzymes in correct quantities and durations to improve juice extraction efficiency, based on the fruit type and processing method.	1	2	-	1
PC9. filter and collect the extracted juice to remove pulp and suspended particles, ensuring clar-ity and proper texture.	1	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. assess the final juice quality based on appearance, colour, consistency, flavour, and taste, ensuring it meets standard specifications. collect the extracted citrus juice, maintaining hygiene	1	2	-	0.5
Pasteurize fruit juice	**3**	**4**	**-**	**2**
PC11. concentrate fruit juice and recover aroma	1	1	-	0.5
PC12. pasteurize fruit juice at the recommended temperature and other process parameters	1	1	-	0.5
PC13. cool the pasteurized juice to the required temperature	0.5	1	-	0.5
PC14. collect the pasteurized juice, ensuring hygiene	0.5	1	-	0.5
Clarify fruit juice	**4**	**6**	**-**	**2**
PC15. determine the quantity of enzymes required for the clarification of juice, based on the formulation chart	1	1	-	0.5
PC16. add the required quantity of enzymes to the pasteurized juice	0.5	1	-	0.5
PC17. identify and remove the smallest particles from enzyme-treated juice to obtain clear juice	0.5	1	-	-
PC18. check the quality of juice based on colour, appearance, flavour, taste, etc.	0.5	1	-	0.5
PC19. prepare juice samples and coordinate their quality analysis with the quality-testing lab to ensure conformance to the applicable standards	1	1	-	-
PC20. store the processed juice at the recommended temperature and humidity until packaging or further processing	0.5	1	-	0.5
Prepare squash	**6**	**11**	**-**	**4**
PC21. prepare sugar syrup using the recommended quantity of sugar and permitted acids	0.5	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC22. maintain the recommended pressure and temperature for the appropriate duration to heat the syrup	0.5	1	-	0.5
PC23. check the quality of sugar syrup to ensure conformance to the applicable specifications and standards	0.5	1	-	0.5
PC24. filter the sugar syrup to remove undesirable particles and sediments	0.5	1	-	0.5
PC25. blend the recommended quantity of juice concentrate/ clarified juice, water, sugar syrup, acids, preservatives, colour, flavour at the appropriate mixing speed and duration	0.5	2	-	0.5
PC26. collect squash sample and check for uniform mixing	0.5	1	-	0.5
PC27. pasteurize the squash blend at the recommended pressure, temperature and process parameters	1	1	-	0.5
PC28. cool the pasteurized squash following the appropriate method	0.5	1	-	0.5
PC29. check the quality of pasteurized squash based on appearance, colour, consistency, flavour, taste etc.	1	1	-	0.5
PC30. sample squash and coordinate with the quality-testing lab for the quality analysis of squash to ensure conformance to the applicable quality standards	0.5	1	-	-
Fill, pack and store juice and squash	**5**	**9**	**-**	**4**
PC31. transfer the finished product into the filling tank of the packing machine up to the recommended level	0.5	1	-	0.5
PC32. load the packing materials in the packaging machine, sealing materials in the sealing machine, and labels in the labelling machine, Packing material: Tetra packs, glass bottles, plastic containers, etc.	1	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC33. set the appropriate filling volume on the filling machine according to the company standards	0.5	1	-	0.5
PC34. set the date coding machine with the batch number, manufacturing date, expiry date, etc.	0.5	1	-	0.5
PC35. carry out packing, sealing and labelling of juice and squash following the applicable procedure	0.5	1	-	0.5
PC36. check the weight of the packed product periodically to ensure conformance to the applicable standards	0.5	1	-	0.5
PC37. attach straw in the packaging of packed products	0.5	1	-	0.5
PC38. store the packed and labelled products in storage area under the appropriate conditions, using the relevant storage accessories	0.5	1	-	0.5
PC39. report discrepancies/concerns to the department supervisor for immediate action	0.5	1	-	-
Carry out post production activities	**4**	**6**	**-**	**2**
PC40. clean the work area, tools, equipment and machinery using the approved cleaning agents and sanitizers	0.5	1	-	0.5
PC41. follow the Clean-in-Place (CIP) and Clean-out-of-Place (COP) procedures	1	1	-	0.5
PC42. carry out basic repair and maintenance of the tools, equipment and machinery	0.5	1	-	0.5
PC43. follow the maintenance schedule and procedure for the tools, equipment and machinery in the manuals provided by the manufacturer	0.5	1	-	0.5
PC44. collect and dispose of the waste generated during fruit juice extraction and squash production	1	1	-	-
PC45. carry out appropriate documentation concerning the fruit juice extraction and squash production	0.5	1	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	**30**	**50**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N0103
NOS Name	Produce Squash and Juice
Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing-Fruits and Vegetables
NSQF Level	3
Credits	2
Version	4.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025

FIC/N0111: Produce jam, jelly and ketchup

Description

This unit is about production of jam, jelly and ketchup using various machineries as per the specifications and standards of the organization.

Scope

The scope covers the following :

- Prepare jam and jelly
- Prepare ketchup
- Fill and pack jam, jelly and ketchup
- Carry out post-production cleaning and regular maintenance of equipment

Elements and Performance Criteria

Prepare jam and jelly

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

PC1. transfer the required quantity of fruit pulp or juice from the holding tank/container to the cooking kettle/tank for jam/jelly preparation

PC2. heat the fruit pulp or juice to the specified temperature and concentration

PC3. continuously stir the pulp to prevent sticking or scorching

PC4. monitor pressure and temperature gauges, adjusting controls as needed to maintain optimal cooking conditions

PC5. Ensure compliance with FSSAI guidelines for fruit content: Jam: minimum 45% fruit pulp, Jelly: Minimum 45% fruit extract, Marmalade: minimum 45% fruit ingredients, and Preserves: minimum 55% fruit content

PC6. measure and transfer the specified quantity of water into the pre-mixing tank

PC7. prepare a pectin/gelatin solution by adding the measured quantity to the pre-mixing tank with uniform stirring

PC8. add ingredients to the pulp/juice in the kettle/tank as per the formulation chart

PC9. operate the cooker and set the required temperature and pressure controls

PC10. transfer the solution at a specific Brix and temperature into the cooker for high-temperature and high-pressure cooking

PC11. observe the cooking process and use a refractometer to ensure completion

PC12. assess the quality of the cooked product based on color, texture, appearance, and taste.

PC13. collect samples and send them to the quality lab for analysis

PC14. transfer the heated product manually or automatically into the hopper for bottled jam/jelly packaging

PC15. transfer the heated product into the filling/molding machine hopper for jelly-making

PC16. monitor the molding process, ensuring jellies meet the required shape, size, and weight, adjusting controls as necessary

PC17. regulate the speed of the cooling conveyor and fans to bring jellies to the appropriate packaging temperature

PC18. identify and rework defective jellies by heating them with pulp while discarding any contaminated products per organizational procedures

PC19. transfer approved jellies to the packaging machine, either automatically via packing conveyors or manually using crates/containers.

Prepare ketchup

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

PC20. transfer the measured quantity of tomato pulp/puree from the holding tank/container into the cooking kettle as per formulation

PC21. heat the tomato paste to the required temperature and thickness by opening the steam valves or lighting the burner, ensuring continuous stirring to prevent sticking or scorching.

PC22. measure the required ingredients such as sugar, salt, spices, and vinegar according to the formulation chart.

PC23. follow the prescribed sequence to add the measured ingredients into the tomato pulp/puree in the kettle, adhering to Standard Operating Procedures (SOP), and continue pre-cooking

PC24. observe the pre-cooking process and assess the product quality based on consistency, feel, color, and Brix levels using a refractometer

PC25. ensure compliance with FSSAI fruit content guidelines: Tomato Ketchup must contain a minimum of 25% tomato solids and tomato Sauce must contain a minimum of 15% tomato solids

PC26. transfer the pre-cooked mixture at a specific Brix and temperature into the cooker for further processing at higher temperature and pressure

PC27. Calibrate the refractometer using a standard solution before measuring the Brix level of the product to ensure accuracy

PC28. observe the cooking process and check the product in the calibrated refractometer to confirm the required concentration and consistency

PC29. evaluate the quality of the cooked product based on its physical parameters such as color, appearance, texture, and taste

PC30. take a sample of the cooked product and send it to the quality lab for analysis to ensure compliance with food safety and quality standards

PC31. transfer the final product into the filling tank/hopper of the packaging machine or manually fill hot product into packaging containers following hygiene and safety protocols

Fill and pack jam, jelly and ketchup

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

PC32. transfer the heated jam, jelly, molded jelly, or ketchup into the packaging machine by operating the valves and pump, ensuring smooth and controlled flow

PC33. inspect packaging materials (glass bottles, plastic bottles, pouches, jars, laminates, etc.) and sealing components (lids, closures, etc.) for defects, cleanliness, and compliance with quality standards before loading them onto the packaging machine

PC34. set the packaging machine parameters, including filling volume, speed, and container size, as per the product and packaging specifications

PC35. operate the automatic packaging machine for bottle washing, container forming, filling, and sealing, or manually fill the hot product into containers, ensuring lids are properly placed and sealed mechanically or manually

PC36. start the machine to fill hot products/jellies into containers, jars, or bottles and periodically check the weight of packed products to ensure they meet the prescribed standards

PC37. inspect filled containers for proper sealing, labeling accuracy, and potential defects, ensuring compliance with quality control measures

PC38. spray water on packed containers to cool and set the product (for jam and jelly), or arrange filled containers in racks and allow them to cool for the specified duration following SOP

PC39. pass cooled bottles through the drying tunnel by setting air dryer controls (temperature, airflow rate, etc.) before labeling to ensure bottles are dry and ready for further processing

PC40. load labels into the labeling machine and set batch coding details, including date of manufacture, best-before date, and batch number as per regulatory requirements

PC41. conduct final inspection of labels to verify proper placement, alignment, and accuracy of printed details

PC42. place packed and labeled products into cartons, ensuring proper stacking, and transfer them to the storage area, maintaining appropriate storage conditions as per SOP

PC43. perform preventive maintenance of packaging machines, such as cleaning, lubrication, and checking for wear and tear, to ensure optimal performance and minimize downtime

PC44. promptly report any discrepancies, equipment malfunctions, or quality concerns to the department supervisor for immediate resolution

Carry out post-production cleaning and regular maintenance of equipment

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

PC45. clean the work area, machinery, equipment, and tools thoroughly using approved cleaning agents and sanitizers, ensuring compliance with hygiene and safety standards

PC46. perform Clean-in-Place (CIP) procedures for automated cleaning of processing equipment, following standard protocols to remove residues and maintain sanitation

PC47. conduct routine checks and attend to minor repairs or faults in machinery and equipment to ensure smooth operation and prevent production downtime

PC48. follow the prescribed maintenance schedule (daily, weekly, monthly, quarterly, half-yearly, and annual) for all machines and equipment, adhering to SOPs and supplier instructions/manuals

PC49. document all cleaning, repair, and maintenance activities, reporting major faults or irregularities to the supervisor for immediate corrective action

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. ingredients and their functions in ketchup, jam, and jelly production, including sugar, salt, spice powder, vinegar, pectin, gelatin, preservatives, and permitted additives

KU2. the operating procedures for cooking kettles, including temperature and pressure control, stirring techniques, and precautions to prevent scorching or sticking

KU3. methods to test the viscosity of ketchup using a viscometer and determine the desired consistency

KU4. the procedures to operate packaging machines, including filling, sealing, and labeling of jam, jelly, and ketchup

KU5. SOP for loading labels into labeling machines and ensuring proper placement and alignment

KU6. the steps to set up a date coding machine for batch number, date of manufacture, expiry date, and best-before labeling

KU7. food safety, hygiene, and sanitation protocols in line with organizational policies and regulatory guidelines (e.g., FSSAI, HACCP, GMP)

KU8. SOP for clarifying fruit juice, including filtration techniques and removal of pulp and sediments

KU9. the process for preparing clarified fruit juice squash, including ingredient proportioning, mixing, and quality checks

KU10. transfer process of finished products (jam, jelly, ketchup) to the filling tank/hopper for packaging

KU11. SOP for washing and sanitizing bottles, plastic containers, and packaging materials before filling to prevent contamination

KU12. the post-production cleaning and maintenance of equipment, including CIP (Clean-in-Place) systems, manual cleaning, and preventive maintenance schedules

KU13. the inspection and quality control procedures to check product consistency, color, texture, and adherence to food safety standards

KU14. the identification and handling of packaging material defects, ensuring proper selection and storage of packaging components

KU15. the preventive maintenance and troubleshooting of packaging machinery, including regular servicing, lubrication, and part replacements

KU16. the calibration process for testing equipment, including refractometer standardization and viscometer adjustments

KU17. how to comply with FSSAI guidelines for maintaining minimum fruit content in ketchup (e.g.,25percent fruit solids for tomato ketchup) and fruit-based spreads

KU18. the waste management, recycling, and disposal procedures for rejected, defective, or excess products in compliance with organizational SOPs

Generic Skills (GS)

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

GS1. record instructions from supervisors, raw materials used, finished products, process read-ings, and observations for process charts

GS2. read and interpret equipment manuals, process documents, and internal communications for operational understanding

GS3. write information documents to internal departments/ internal teams

GS4. plan, prioritize, and sequence work operations

GS5. communicate effectively with the team members, senior/supervisor, and other depart-ments

GS6. discuss task lists, schedules, and activities with the senior/supervisor

GS7. analyse critical points in day-to-day tasks through experience and observation and identify control measures to solve the issue

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare jam and jelly	**15**	**20**	**-**	**8**
PC1. transfer the required quantity of fruit pulp or juice from the holding tank/container to the cooking kettle/tank for jam/jelly preparation	1	2	-	0.5
PC2. heat the fruit pulp or juice to the specified temperature and concentration	1	1	-	0.5
PC3. continuously stir the pulp to prevent sticking or scorching	1	1	-	-
PC4. monitor pressure and temperature gauges, adjusting controls as needed to maintain optimal cooking conditions	1	1	-	0.5
PC5. Ensure compliance with FSSAI guidelines for fruit content: Jam: minimum 45% fruit pulp, Jelly: Minimum 45% fruit extract, Marmalade: minimum 45% fruit ingredients, and Preserves: minimum 55% fruit content	1	1	-	0.5
PC6. measure and transfer the specified quantity of water into the pre-mixing tank	1	1	-	-
PC7. prepare a pectin/gelatin solution by adding the measured quantity to the pre-mixing tank with uniform stirring	1	1	-	0.5
PC8. add ingredients to the pulp/juice in the kettle/tank as per the formulation chart	1	1	-	0.5
PC9. operate the cooker and set the required temperature and pressure controls	1	1	-	0.5
PC10. transfer the solution at a specific Brix and temperature into the cooker for high-temperature and high-pressure cooking	0.5	1	-	0.5
PC11. observe the cooking process and use a refractometer to ensure completion	0.5	1	-	0.5
PC12. assess the quality of the cooked product based on color, texture, appearance, and taste.	1	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. collect samples and send them to the quality lab for analysis	1	1	-	0.5
PC14. transfer the heated product manually or automatically into the hopper for bottled jam/jelly packaging	0.5	1	-	-
PC15. transfer the heated product into the filling/molding machine hopper for jelly-making	0.5	1	-	0.5
PC16. monitor the molding process, ensuring jellies meet the required shape, size, and weight, adjusting controls as necessary	0.5	1	-	0.5
PC17. regulate the speed of the cooling conveyor and fans to bring jellies to the appropriate packaging temperature	0.5	1	-	0.5
PC18. identify and rework defective jellies by heating them with pulp while discarding any contaminated products per organizational procedures	0.5	1	-	0.5
PC19. transfer approved jellies to the packaging machine, either automatically via packing conveyors or manually using crates/containers.	0.5	1	-	0.5
Prepare ketchup	**6**	**12**	**-**	**6**
PC20. transfer the measured quantity of tomato pulp/puree from the holding tank/container into the cooking kettle as per formulation	0.5	1	-	0.5
PC21. heat the tomato paste to the required temperature and thickness by opening the steam valves or lighting the burner, ensuring continuous stirring to prevent sticking or scorching.	0.5	1	-	0.5
PC22. measure the required ingredients such as sugar, salt, spices, and vinegar according to the formulation chart.	0.5	1	-	0.5
PC23. follow the prescribed sequence to add the measured ingredients into the tomato pulp/puree in the kettle, adhering to Standard Operating Procedures (SOP), and continue pre-cooking	0.5	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC24. observe the pre-cooking process and assess the product quality based on consistency, feel, color, and Brix levels using a refractometer	0.5	1	-	0.5
PC25. ensure compliance with FSSAI fruit content guidelines: Tomato Ketchup must contain a minimum of 25% tomato solids and tomato Sauce must contain a minimum of 15% tomato solids	0.5	1	-	0.5
PC26. transfer the pre-cooked mixture at a specific Brix and temperature into the cooker for further processing at higher temperature and pressure	0.5	1	-	0.5
PC27. Calibrate the refractometer using a standard solution before measuring the Brix level of the product to ensure accuracy	0.5	1	-	0.5
PC28. observe the cooking process and check the product in the calibrated refractometer to confirm the required concentration and consistency	0.5	1	-	0.5
PC29. evaluate the quality of the cooked product based on its physical parameters such as color, appearance, texture, and taste	0.5	1	-	0.5
PC30. take a sample of the cooked product and send it to the quality lab for analysis to ensure compliance with food safety and quality standards	0.5	1	-	0.5
PC31. transfer the final product into the filling tank/hopper of the packaging machine or manually fill hot product into packaging containers following hygiene and safety protocols	0.5	1	-	0.5
Fill and pack jam, jelly and ketchup	**6**	**13**	**-**	**4**
PC32. transfer the heated jam, jelly, molded jelly, or ketchup into the packaging machine by operating the valves and pump, ensuring smooth and controlled flow	0.5	1	-	0.5
PC33. inspect packaging materials (glass bottles, plastic bottles, pouches, jars, laminates, etc.) and sealing components (lids, closures, etc.) for defects, cleanliness, and compliance with quality standards before loading them onto the packaging machine	0.5	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC34. set the packaging machine parameters, including filling volume, speed, and container size, as per the product and packaging specifications	0.5	1	-	0.5
PC35. operate the automatic packaging machine for bottle washing, container forming, filling, and sealing, or manually fill the hot product into containers, ensuring lids are properly placed and sealed mechanically or manually	0.5	1	-	-
PC36. start the machine to fill hot products/jellies into containers, jars, or bottles and periodically check the weight of packed products to ensure they meet the prescribed standards	0.5	1	-	0.5
PC37. inspect filled containers for proper sealing, labeling accuracy, and potential defects, ensuring compliance with quality control measures	0.5	1	-	0.5
PC38. spray water on packed containers to cool and set the product (for jam and jelly), or arrange filled containers in racks and allow them to cool for the specified duration following SOP	0.5	1	-	-
PC39. pass cooled bottles through the drying tunnel by setting air dryer controls (temperature, airflow rate, etc.) before labeling to ensure bottles are dry and ready for further processing	0.5	1	-	-
PC40. load labels into the labeling machine and set batch coding details, including date of manufacture, best-before date, and batch number as per regulatory requirements	0.5	1	-	0.5
PC41. conduct final inspection of labels to verify proper placement, alignment, and accuracy of printed details	0.5	1	-	0.5
PC42. place packed and labeled products into cartons, ensuring proper stacking, and transfer them to the storage area, maintaining appropriate storage conditions as per SOP	0.5	1	-	-
PC43. perform preventive maintenance of packaging machines, such as cleaning, lubrication, and checking for wear and tear, to ensure optimal performance and minimize downtime	0.5	1	-	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC44. promptly report any discrepancies, equipment malfunctions, or quality concerns to the department supervisor for immediate resolution	-	1	-	-
Carry out post-production cleaning and regular maintenance of equipment	**3**	**5**	**-**	**2**
PC45. clean the work area, machinery, equipment, and tools thoroughly using approved cleaning agents and sanitizers, ensuring compliance with hygiene and safety standards	1	1	-	-
PC46. perform Clean-in-Place (CIP) procedures for automated cleaning of processing equipment, following standard protocols to remove residues and maintain sanitation	0.5	1	-	0.5
PC47. conduct routine checks and attend to minor repairs or faults in machinery and equipment to ensure smooth operation and prevent production downtime	0.5	1	-	0.5
PC48. follow the prescribed maintenance schedule (daily, weekly, monthly, quarterly, half-yearly, and annual) for all machines and equipment, adhering to SOPs and supplier instructions/manuals	0.5	1	-	0.5
PC49. document all cleaning, repair, and maintenance activities, reporting major faults or irregularities to the supervisor for immediate corrective action	0.5	1	-	0.5
NOS Total	**30**	**50**	**-**	**20**

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N0111
NOS Name	Produce jam, jelly and ketchup
Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Processing-Fruits and Vegetables
NSQF Level	3
Credits	2
Version	3.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

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

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

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

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

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

6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level : 50

(**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	20
FIC/N0122.Produce fruit pulp from various fruits	30	50	-	20	100	40
FIC/N9906.Apply food safety guidelines in Food Processing	30	60	-	10	100	10
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
Total	**110**	**210**	**-**	**30**	**350**	**80**

Elective: 1 Squash and Juice

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N0103.Produce Squash and Juice	30	50	-	20	100	20
Total	**30**	**50**	**-**	**20**	**100**	**20**

Elective: 2 Jam, Jelly and Ketchup

Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N0111.Produce jam, jelly and ketchup	30	50	-	20	100	20
Total	**30**	**50**	**-**	**20**	**100**	**20**

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
HACCP	Hazard Analysis and Critical Control Points
FSSAI	Food Safety and Standards Authority of India
NCVET	National Council for Vocational Education and Training
GMPs	Good Manufacturing Practices
PPE	Personal Protective Equipment
LOTO	Lockout/Tagout
SOS	Safety Data Sheets

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	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.