

Model Curriculum

Squash and Juice Processing Technician

SECTOR: FOOD PROCESSING
SUB-SECTOR: FRUITS AND VEGETABLES
OCCUPATION: PROCESSING
REF ID: FIC/Q0101, V1.0
NSQF LEVEL: 4



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

FOOD INDUSTRY CAPACITY AND SKILL INITIATIVE (FICSI)

for the

MODEL CURRICULUM

Complying to National Occupational Standards of

Job Role/ Qualification Pack: **'Squash and Juice Processing Technician'** QP No. **'FIC/Oo101, NSQF Level 4'**

Date of Issuance: 04 September, 2018

Valid up to: 30 June, 2019

* Valid up to the next review date of the Qualification Pack



Authorized Signatory
(Food Industry Capacity and Skill Initiative)

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Squash and Juice Processing Technician

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Squash and Juice Processing Technician”, in the “Food Processing” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Squash and Juice Processing Technician		
Qualification Pack Name & Reference ID. ID	FIC/Q0101, v1.0		
Version No.	1.0	Version Update Date	04/09/2018
Pre-requisites to Training	Preferably Class 8 and 2-3 years' experience in squash and juice processing unit		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none"> • prepare and maintain work area and process machineries for squash and juice processing, • prepare for production of squash and juice, • produce squash and juice, • document and maintain record related to production of squash and juice, • follow and maintain food safety and hygiene in the work environment. 		

This course encompasses 5 out of 5 National Occupational Standards (NOS) of “Squash and Juice Processing Technician” Qualification Pack issued by “Food Industry Capacity and Skill Initiative”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1.	<p>Introduction to the training program and overview of Food Processing Industry</p> <p>Theory Duration (hh:mm) 02:00</p> <p>Practical Duration (hh:mm) 00:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> Introduce each other and build rapport with fellow participants and the trainer. List the various subsectors of food processing industry Define fruits and vegetables Processing State the need for fruits and vegetables processing Define squash and juice processing Identify nature and availability of job opportunities List various subsectors of beverage industry List the various fruit drinks Define fruit juice and its types List the various fruits used for making squash and juice 	
2.	<p>Organizational standards and norms</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 10:00</p> <p>Corresponding NOS Code FIC/N0103</p>	<ul style="list-style-type: none"> State the roles and responsibilities of a squash and juice processing technician State how to conduct yourself at the workplace State the personal hygiene and sanitation guidelines State the food safety and hygiene standards to follow in an organization 	Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual
3.	<p>Prepare and Maintain Work Area and Process Machineries for Squash and Juice processing</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 15:00</p>	<ul style="list-style-type: none"> Identify different equipment used in squash and juice processing State the materials and equipment used in cleaning and maintenance of the work area and machineries State the cleaning processes used to clean the work area Demonstrate the use of different tools and machineries used for squash and juice Demonstrate the appropriate method for cleaning and maintaining a work area to ensure the work area is safe and hygienic for food processing 	Thermometer (Digital), Beakers, Measuring Cylinder, Measuring Flask, Weighing Balance (Digital), Brix Meter/ Refractometer, Fruit Tray, Cutting Knives, Mixer/Electric Mixer, Fruit Slicing Machine, Pulper, Peeler, Steam Jacketed Kettle, Slicer, Pasteurizer, Sterilizer, Clarifier, Protective

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code FIC/N0101	<ul style="list-style-type: none"> Identify the set of machines and tools required for production Perform cleanliness of the process machineries required for production using recommended sanitizers 	Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual
4.	Food Microbiology Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 08:00 Corresponding NOS Code FIC/N0103	<ul style="list-style-type: none"> State the types of food microbes State the causes of food spoilage State the process of food spoilage and the criteria to check food spoilage State the need for food preservation State the different types of food preservation processes Explain the method of assessing the quality of produce based on physical parameters 	Samples of Fresh and Spoiled Food
5.	Prepare for production of Squash and Juice Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 20:00 Corresponding NOS Code FIC/N0102	<ul style="list-style-type: none"> Use basic mathematics for various calculations in day-to-day processes Plan the production schedule as per organizational standards and instructions Organize the raw materials, packaging materials, manpower, equipment and machineries for the scheduled production Identify the raw materials required for production as per production schedule and formation State the methods for storing raw materials for later use Plan the production sequence to maximize capacity, utilization of resources, manpower and machinery Calculate batch size and prioritize urgent orders based on the production schedule and machine capacity Inspect the conformance of raw material quality to company standards Organize quality raw material as per production process and company standards Check the raw material quality and grade Prepare the raw material for production 	Thermometer (Digital), Beakers, Measuring Cylinder, Measuring Flask, Weighing Balance (Digital), Brix Meter/ Refractometer, Fruit Tray, Cutting Knives, Mixer/Electric Mixer, Fruit Slicing Machine, Pulper, Peeler, Steam Jacketed Kettle, Slicer, Pasteurizer, Sterilizer, Clarifier, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> List the effect of manhandling of fruits on juice 	
6.	Produce Squash and Juice Theory Duration (hh:mm) 19:00 Practical Duration (hh:mm) 40:00 Corresponding NOS Code FIC/N0103	<ul style="list-style-type: none"> Explain the processing of Squash and Juice Demonstrate the pre-extraction processes of fruits State the procedures used to extract the fruit and vegetable juice/pulp Describe enzyme activity in fruit processing State the procedure for preparing juice and squash Describe pasteurization process for fruit juice Describe sterilization process for fruit juice State the methods of sterilizing fruit juice Demonstrate the method of clarifying fruit juice List the quality parameters of squash and juice Explain aseptic packaging in fruit processing industry Demonstrate the process of packaging squash and juice State the methods for storing raw materials for later use Explain the process of storing packaged fruit pulp State the process of maintaining storage conditions as per organizational standards State kinds of waste produced and its disposal Demonstrate the process of cleaning the work area and machines after production 	Thermometer (Digital), Beakers, Measuring Cylinder, Measuring Flask, Weighing Balance (Digital), Brix Meter/ Refractometer, Fruit Tray, Cutting Knives, Mixer/Electric Mixer, Fruit Slicing Machine, Pulper, Peeler, Steam Jacketed Kettle, Slicer, Pasteurizer, Sterilizer, Clarifier, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual
7.	Complete documentation and record keeping Theory Duration (hh:mm) 12:00 Practical Duration (hh:mm) 06:00	<ul style="list-style-type: none"> State the need for documenting and maintaining records of raw materials, processes and finished products State the method of documenting and recording the details of raw material to final finished product 	Food Safety Manual, Log Books.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code FIC/N0104		
8.	Food Safety, Hygiene and Sanitation Theory Duration (hh:mm) 15:00 Practical Duration (hh:mm) 30:00 Corresponding NOS Code FIC/N9001	<ul style="list-style-type: none"> State the importance of safety, hygiene and sanitation in the baking industry Apply the industry standards to maintain a safe and hygiene workplace Apply HACCP principles to eliminate food safety hazards in the process and products Apply safety practices in the work area 	Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Covers, Sanitizer, Safety Manual, Log Books etc..
9.	Professional and Core Skills Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code Bridge Module	<ul style="list-style-type: none"> Undertake a self -assessment test to identify personal strengths and weaknesses Plan and schedule the work order and manage time effectively to complete the tasks assigned Plan to prevent potential problems from occurring Analyze issues and problems using acquired knowledge and realize the importance of decision making Identify potential problems and make sound and timely decision Develop your reading skills State the importance of listening 	
10.	IT Orientation Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 15:00 Corresponding NOS Code FIC/N0104	<ul style="list-style-type: none"> Identify parts of the computer Use the computer keyboard effectively to type Use ERP effectively to record day-to-day activities Use the word processor effectively Use the spreadsheet application effectively Use the computer to document day-to-day activities 	Computer/Laptop
	Total Duration 240:00	Unique Equipment Required: Thermometer (Digital), Beakers, Measuring Cylinder, Measuring Flask, Weighing Balance (Digital), Brix Meter/ Refractometer, Fruit Tray, Cutting Knives, Mixer/Electric Mixer, Fruit Slicing Machine, Pulper, Peeler, Steam	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Theory Duration 90:00 Practical Duration 150:00	Jacketed Kettle, Slicer, Pasteurizer, Sterilizer, Clarifier, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual, Computer/Laptop	

Grand Total Course Duration: **240Hours, 0 Minutes**

Recommend OJT Hours: **80Hours, 0 Minutes**

*(This syllabus/ curriculum has been approved by **SSC: Food Industry Capacity and Skill Initiative**)*

Trainer Prerequisites for Job role: “Squash and Juice Processing Technician” mapped to Qualification Pack: “FIC/Q0101, v1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “FIC/Q0101”, Version 1.0
2	Personal Attributes	An aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training, and pre/post work to ensure competent, employable candidates at the end of the training. Strong communication skills, ability to work as part of a team; a passion for quality and for developing others; well-organized and focused, eager to learn and keep oneself updated with the latest in the mentioned fields.
3	Minimum Educational Qualifications	<ul style="list-style-type: none"> B.Sc. (home Science) /B. Tech./BE in Food Technology or Food Engineering with 2 years of hands on experience in Squash and Juice Processing Unit or Fruits/Vegetables Processing unit
4a	Domain Certification	Certified for Job Role: “ <u>Squash and Juice Processing Technician</u> ” mapped to QP: “FIC/Q0101, v1.0”. Minimum accepted score is 80%
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted score is 80 % as per FICSI guidelines.
5	Experience	<ul style="list-style-type: none"> B.Sc. (home Science) /B. Tech./B.E. in Food Technology or Food Engineering with 2 years of hands on experience in Squash and Juice Processing Unit or Fruits/Vegetables Processing unit

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Squash and Juice Processing Technician
Qualification Pack	FIC/Q0101, v1.0
Sector Skill Council	Food Processing

Guidelines for Assessment

1. 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 proportion of marks for Theory and Skills Practical for each 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, as well as the selected elective NOS/set of NOS.
OR
4. Assessment will be conducted for all compulsory NOS, as well as the selected optional NOS/set of NOS.
5. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
6. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
7. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
8. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
1. FIC/N0101: Prepare and Maintain Work Area and Process Machineries for Squash and Juice Processing	PC.1 Prepare, clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	100	25	10	15
	PC2. Ensure that the work area is safe and hygienic for food		10	3	7
	PC3. Dispose waste materials as per defined SOPs and industry requirements		15	5	10
	PC4. Check the working and performance of all machineries and tools used for the pickle making process such as washer, peeler, vegetable cutter/slicer, blender, packaging machines etc.		15	5	10
	PC5. Clean the machineries and tools used with approved sanitizers following SOP		15	5	10
	PC6. Place the necessary tools required for process		5	2	3
	PC7. Attend the minor repairs/ faults of all machines, if required		15	5	10
Total			100	35	65
2. FIC/N0102: Prepare for Production of Squash and Juice	PC1. Read and understand the production order from supervisor	100	10	4	6
	PC2. Check the availability of raw materials, packaging materials, equipment availability and manpower		5	2	3
	PC3. Support in planning production sequence <ul style="list-style-type: none"> • Grouping products from types of fruits (pulpy fruits, citrus fruits etc.) • Selecting raw materials that do not impact the quality of the other • Avoiding CIP after each product • Using the same equipment and machinery for various products • Planning maximum capacity utilization of machineries • Considering the process time for each product • Planning efficient utilization of resources/manpower • Prioritizing urgent orders 		15	5	10
	PC4. Calculate the batch size based on the production order and machine capacity		5	2	3
	PC5. Calculate the raw material requirement (considering the process loss) to		5	2	3

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	produce the required quantity of finished				
	PC6. Calculate the raw materials, packaging materials and manpower requirement for completing the order.		5	2	3
	PC7. Ensure the working and performance of each equipment required for the process		7	2	5
	PC8. Calculate the process time for effective utilization of machineries		7	2	5
	PC9. Plan batch size considering full capacity utilization of machineries		3	1	2
	PC10. Plan to utilize machineries for multiple products without affecting the quality of the finished products, and to optimize production and save energy		3	1	2
	PC11. Allot responsibilities and help to assistants and workers		5	1.5	3.5
	PC12. Refer the process chart for products produced		3	1	2
	PC13. Weigh the raw materials required for the batch		3	1	2
	PC14. Check the conformance of raw material quality to organization standards, through physical analysis and by referring the quality analysis report from the supplier/ internal lab analysis report		10	4	6
	PC15. Sharpen cutter blades and change the cutter/slicer blades		2	0.5	1.5
	PC16. Fix, change, clean filters and sieves of processing machineries		5	2	3
	PC17. Ensure working and performance of required machines and tools.		5	1	4
	PC18. Keep the tools assessable to repair in case of faults/ breakdown		2	0.5	1.5
	Total		100	35	65
3. FIC/N0103: Produce Squash and Juice	PC1. Receive fruits from the supplier/vendor, check weight and check quality through physical parameters such as appearance, color, texture, maturity	100	2	1	1
	PC2. Open valves or start pump to fill water in the washing tank and control water level, dump fruits in the washing tank for washing or wash and rinse manually		1	0.5	0.5

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC3. Switch on agitator of revolving blades to immerse fruits in water to remove dirt, soil and other impurities		1	0.5	0.5
	PC4. Start the ladder conveyor to lift the vegetables from the washing tank and to transfer to the conveyor		1	0.5	0.5
	PC5. Open valves of the high pressure spraying system for fresh water and adjust pressure to spray water on vegetables for rinsing		1	0.5	0.5
	PC6. Start and adjust speed of sorting/inspecting line conveyor to transfer fruits to inspection station, inspect visually and remove damaged, blemished and rotten fruit; dispose waste following sop		2	0.5	1.5
	PC7. Cut fruits manually or load the fruits in the chopper/cutter/slicer/grating or grinding machine, adjust controls to cut/grate fruits to required size, start machine and then collect sliced/grated fruits from the discharge chute		2	0.5	1.5
	PC8. Start the conveyor and control speed to transfer fruits to juice extractors (in case of citrus fruits), crusher and fruit mills (for fruits such as apples, pear, etc.), or stem and seed remover (grapes and berries)		1	0.5	0.5
	PC9. Set controls such as speed/rotation of stem and seed remover machine, start machine and feed fruits such as grapes and berries though conveyor to remove stem and seed; dispose waste following sop		2	0.5	1.5
	PC10. Set controls such as speed/rotation, feed rate, etc. Of citrus fruit extractor or rotary press machine to extract juice from citrus juice (citrus fruit extractor), start machine and open valves to allow citrus fruits to pass though machine to extract juice; simultaneously remove peel and seeds, collect juice flowing though the discharge outlet in collection tank; dispose waste following SOP		3	1	2
	PC11. Set controls such as speed/rotation of fruit mills (fruit grinding mill/grater mill/ hammer mill) depending on the type of fruit, start machine and open valves to allow fruits such as apple,		3	1	2

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	pear, etc. To pass through machine for grinding fruit into fine grating				
	PC12. Measure enzymes required for batch following formulation chart, pump cut/ grated fruit into reservoir tank and add measured quantity of enzymes (for selected fruits like apple), set timer for fruit-enzyme contact time following sop and allow to stand for specified time for enzyme activity		1	0.5	0.5
	PC13. Adjust controls such as speed/rotation of pressing machines (hydraulic press/ cloth press/ continuous belt press / screw press, etc.), start machine and open valves to allow (enzyme treated) fruits such as apple, pear, etc. To pass through machine for extraction of juice and removal of peel, stem and seeds, collect juice in collection tank; dispose waste following SOP		3	1	2
	PC14. Open valve of start pump to transfer fruit juice to filter for removing small suspended particles (in case of apple, pear, etc.), collect filtered juice in collection tank		2	0.5	1.5
	PC15. Change sieves or clean sieves of juice extraction machines to avoid clogging; change or sharpen blades of fruit mills for better grinding		1	0.5	0.5
	PC16. Check the quality of extracted juice through physical parameters such as appearance, color, consistency, flavor, taste, etc., sample and transfer to quality lab for analysis		2	1	1
	PC17. Set controls such as temperature, steam pressure, etc. Of vacuum concentrate machine; start pump to allow fruit juice to pass thorough machine to concentrate fruit juice and recover aroma (aroma stripping)		2	0.5	1.5
	PC18. Set process parameters such as pressure, temperature, flow rate, time, etc. Of pasteurizer		4	1.5	2.5
	PC19. Open valves to allow steam to pass through pasteurizer, observe temperature and pressure gauge and adjust controls to achieve required pressure and temperature		4	1.5	2.5
	PC20. Open valves to allow juice to pass to the pasteurizer, monitor and maintain		3	1	2

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	process parameters throughout the pasteurization process (pasteurize cloudy juice immediately after pressing)				
	PC21. Open valves or start pump to circulate water through heat exchangers to cool pasteurized juice, open valves to allow pasteurized juice to pass through heat exchangers to cool to required temperature, collect in collection tank		4	1.5	2.5
	PC22. Measure enzymes required for clarification of juice following formulation chart, add to the pasteurized juice in the collection tank (for obtaining clear juice), start stirrer and control speed for uniform mixing of enzymes		4	1.5	2.5
	PC23. Open valves or start pump to allow enzyme treated juice to pass through ultrafiltration unit to remove smallest particles and obtain clear juice		4	1.5	2.5
	PC24. Check quality of juice through physical parameters such as color, appearance, flavor, taste, etc., sample and transfer to lab for quality analysis and to ensure conformance to standards		4	1.5	2.5
	PC25. Pump processed juice to the holding /reservoir tanks and store maintaining storage parameters until packaging or further processing (to prepare squash)		3	1	2
	PC26. Open valve to admit measured quantity of water into steam jacketed kettle/tank, observe gauge or designated mark for filled quantity		3	1	2
	PC27. Measure sugar (add acids if specified in the formulation) and add it to water in the kettle/tank to prepare sugar syrup, turn on mixer/agitator and control speed to mix ingredients		3	1	2
	PC28. Turn valves to admit steam into kettle/tank, set required pressure, temperature and time to heat the solution following sop, observe pressure and temperature gauge, adjust valves to maintain set parameters		3	1	2
	PC29. Check sugar syrup using refractometer instrument to conform its		3	1	2

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	specifications to standards, open valves or start pump to allow sugar syrup to pass through filter to remove undesirable particles and sediments, collect filtered sugar syrup in storage or holding tanks				
	PC30. Start pump to transfer measured quantity of (single or multiple fruit) juice concentrate or clarified juice (depending on type of product produced) , water, sugar syrup into blending tank; check pumped quantity through the level indicator and glass windows of the tank, add measured quantity of acids, preservatives, color, flavor, etc. Following sop, set controls of stirrer/agitator (mixing speed, mixing time, etc.) And start mixer, observe mixing process, collect sample and check physical parameters to ensure uniform mixing		5	2	3
	PC31. Adjust controls to set temperature, pressure, etc. Of pasteurizer/heat exchanger; turn valves to admit steam, start pump to transfer blended product into pasteurizer/heat exchanger, check dials and adjust gauges to control process parameters, open valves to allow water to pass through heat exchanger to cool product, open valves to collect finished product in storage tank, to hold until packaging		5	1	4
	PC32. Check the quality of finished product through physical parameters (appearance, color, consistency, flavor, taste etc.), sample and transfer to quality lab for analysis and to ensure conformance to quality standards		3	1	2
	PC33. Start pump to transfer finished product into the filling tank of packaging machine		1	0.5	0.5
	PC34. Load packing materials (tetra packs, glass bottles, plastic containers, etc.) In packaging machine, sealing materials (caps, lids, crowns, etc.) In sealing machine, labels in labelling machine; set machine for filling		3	1	2

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	volume, set date coding machine for date code details (batch number, date of manufacture, date of expiry, etc.)				
	PC35. Start automatic packaging machine to form packaging materials, wash bottle/plastic containers, fill measured quantity of finished products, close/seal and label, check the weight of packed product periodically to ensure its conformance to standards		2	0.5	1.5
	PC36. Set controls of straw attaching machine and start machine to attach straw in the packaging material (like tetra pack) of packed product		1	0.5	0.5
	PC37. Place packed and labelled products in cartons and transfer to storage area and store maintaining storage conditions following SOP		2	0.5	1.5
	PC38. Report discrepancies/concerns to department supervisor for immediate action		1	0.5	0.5
	PC39. Clean the work area, machineries, equipment and tools using approved cleaning agents and sanitizers		2	0.5	1.5
	PC40. Attend minor repairs/faults of all machines (if any)		2	0.5	1.5
	PC41. Ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual) maintenance of all machines and equipment following the SOP or following suppliers instructions/manuals		1	0.5	0.5
	Total		100	35	65
4. FIC/N0104: Complete Documentation and Record Keeping Related to Production of Squash and Juice	PC1. Document and maintain records of details of raw materials and packaging materials as per organizational standards	100	10	6	4
	PC2. Document and maintain record on observations (if any) related to raw materials and packaging materials		5	3	2
	PC3. Load the raw material details in ERP for future reference		5	3	2
	PC4. Verify the documents and track from finished products to raw materials, in case of quality concerns and during quality management system audits		5	3	2
	PC5. Document and maintain records of production plan with details		10	6	4

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC6. Document and maintain records of process details for entire production in process chart or production log for all products produced		15	9	6
	PC7.Document and maintain records of batch size, production yield, wastage of raw materials, energy utilization and final product produced		10	6	4
	PC8. Document and maintain record of observations or deviations		5	3	2
	PC9. Load the production plan and process details in ERP for future reference		5	3	2
	PC10. Verify documents and track from finished product to ingredients, in case of quality concerns and for quality management system audit		5	3	2
	PC11.Document and maintain records of finished products		3	2	1
	PC12. Document and maintain records of the finished product details as per organizational standards		7	4	3
	PC13. Document and maintain record on observations or deviations related to finished products		5	3	2
	PC14. Load the finished product details in ERP for future reference		5	3	2
	PC15. Verify the documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits		5	3	2
	Total		100	60	40
5. FIC/N9001: Food Safety, Hygiene and Sanitation for Processing Food Products	PC1. Comply with food safety and hygiene procedures followed in the organization	100	5	2	3
	PC2. Ensure personal hygiene by use of gloves, masks ,hair net, ear plugs, boots etc.		6	1	5
	PC3. Ensure hygienic production of food by inspecting raw materials, ingredients, finished products etc. for compliance to physical, chemical and microbiological procedures		5	2	3
	PC4. Pack products in appropriate packaging material, label and store them in designated area free from pests, flies etc.		10	4	6
	PC5. Clean, maintain and monitor food processing equipments periodically, using it only for the specified purpose		5	2	3

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC6. Use safety equipment such as fire extinguisher, eye wash unit, first aid kit when required		10	4	6
	PC7. Follow housekeeping practices by having designated area for machines/tools		5	2	3
	PC8. Follow industry standards like GMP, HACCP and product recall		10	4	6
	PC9. Attend training on hazard management to understand type of physical, chemical and microbiological hazards		5	1	4
	PC10. Identify, document and report problems such as rodents and pests to management		5	1	4
	PC11. Conduct workplace checklist audit before and after work to ensure safety and hygiene		5	1	4
	PC12. Document and maintain raw material, process, packaging material to maintain the effectiveness of quality system		4	1	3
	PC13. Determine the quality of food using criteria such as odor, color, taste and best before date and take immediate measures to prevent spoilage		5	2	3
	PC14. Store raw materials, finished products and allergens separately to prevent cross contamination		5	2	3
	PC15. Label raw materials and finished products and store them in different storage areas according to safe food practices		5	2	3
	PC16. Follow stock rotation based on FEFO/FIFO		10	4	6
	Total		100	35	65
	Grand Total	500	500	200	300
	Percentage Weightage		100	40%	60%
	Minimum Pass% to qualify (aggregate):			70%	