

Model Curriculum

Food Products Packaging Technician

SECTOR: FOOD PROCESSING
SUB-SECTOR: FRUIT AND VEGETABLE, FOOD GRAIN MILLING (INCLUDING OILSEEDS), DAIRY PRODUCTS, MEAT AND POULTRY, FISH & SEA FOOD, BREAD AND BAKERY, ALCOHOLIC BEVERAGES, AERATED WATER/SOFT DRINKS
OCCUPATION: PACKAGING
REF ID: FIC/Q7001, V1.0
NSQF LEVEL: 5



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: 'Food Products Packaging Technician' No. 'FIC/Q7001, NSQF Level 5'

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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Food Products Packaging Technician

CURRICULUM / SYLLABUS

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

Program Name	Food Products Packaging Technician		
Qualification Pack Name & Reference ID. ID	FIC/Q7001, v1.0		
Version No.	1.0	Version Update Date	04/09/2018
Pre-requisites to Training	Preferably Class 12 and 2-3 year experience in a packaging unit		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none"> • prepare and maintain work area and machineries for packaging food products, • prepare for packaging food products, • package food products, • document and record keeping related to packaging food products, • apply food safety, hygiene and sanitation standards for packaging food products. 		

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

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	Introduction and Overview of Packaging Industry Theory Duration (hh:mm) 02:00 Practical Duration (hh:mm) 00:00 Corresponding NOS Code Bridge Module	<ul style="list-style-type: none"> Define food processing List the various sub sectors of food processing industry State the need for packaging List the various units within a packaging industry State the methods of testing packaging for accepted quality standards 	
2	Organizational Standards and Norms Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 10:00 Corresponding NOS Code FIC/N7003	<ul style="list-style-type: none"> State the roles and responsibilities of a food product packaging technician State how to conduct yourself at the workplace State the personal hygiene and sanitation guidelines State the food safety hygiene standards to follow in a work environment 	Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual
3	Prepare and Maintain Work Area and Process Machineries for Packaging Food Products Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 25:00 Corresponding NOS Code FIC/N7001	<ul style="list-style-type: none"> State the materials and equipment used in the cleaning and maintenance of the work area State the common detergents and sanitizers used in cleaning work area and machineries State the methods of cleaning and sanitization Perform the process of preparing the work area for scheduled production Describe the functions to be carried out before starting production State the different types of maintenance procedures Conduct minor repairs and faults in process machineries Prepare the machines and tools required for production 	Different types of Packaging Material, Conveyor, Hopper, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual

Sr. No.	Module	Key Learning Outcomes	Equipment Required
4.	Prepare For Packaging Food Products Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 20:00 Corresponding NOS Code FIC/N7002	<ul style="list-style-type: none"> Describe the work order Explain how to check the availability of packaging materials, equipment and manpower Calculate the packaging material requirement for all categories of packaging, such as primary, secondary and tertiary for completing the order Demonstrate starting machine and checking the working condition and performance of the machine Demonstrate moving of required packaging materials Inspect the packaging material quality to company standards 	Different Types of Packaging Material, Conveyor, Hopper, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual
5.	Package Food Products Theory Duration (hh:mm) 26:00 Practical Duration (hh:mm) 40:00 Corresponding NOS Code FIC/N7003	<ul style="list-style-type: none"> Demonstrate feeding food product to conveyors, hoppers or other feeding devices for packaging Demonstrate feeding the packaging materials Demonstrate setting controls and regulate speed of packaging line conveyor Demonstrate removing packaged product (i.e. primary packaging material) from the machine Demonstrate checking the weight of the packed pouch/containers and adjust controls if required Demonstrate glue/paste label on the primary packaging material (in case of bottles) Demonstrate checking the quality of the secondary packaging materials Demonstrate placing the filled primary packaging materials (bottles, pouches) manually in secondary packaging material (carton/crate) Demonstrate checking the quality of the tertiary packaging materials Demonstrate placing the product in tertiary packaging material Demonstrate removing tertiary packed product from the packaging machine Demonstrate cleaning of machineries used with recommended sanitizers following CIP (clean-in-place) procedure 	Different Types of Packaging Material, Conveyor, Hopper, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual, Packing Rolls, Shrink Packing Machine, Vacuum Packing Machine, Labeler, Sealer, Wrapping Machine

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Demonstrate cleaning the equipment and tools used using recommended cleaning agents and sanitizers 	
6.	Complete Documentation and Record Keeping Related to Packaging Food Products Theory Duration (hh:mm) 08:00 Practical Duration (hh:mm) 04:00 Corresponding NOS Code FIC/N7004	<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 Demonstrate the process of documenting records of production plan, process parameters, and finished products 	Food Safety Manual, Log Books.
7.	Food Safety, Hygiene and Sanitation for Packaging Food Products Theory Duration (hh:mm) 20:00 Practical Duration (hh:mm) 30:00 Corresponding NOS Code FIC/N7005	<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.
8.	Professional and Core Skills Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 06:00	<ul style="list-style-type: none"> Plan a general aptitude self-assessment test Identify personal strengths and weaknesses Plan and schedule the work order and manage time effectively to complete the tasks assigned State the importance of decision making Identify potential problems and make sound and timely decision 	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code Bridge Module	<ul style="list-style-type: none"> State the importance of listening 	
9.	IT Orientation Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 15:00 Corresponding NOS Code FIC/N7004	<ul style="list-style-type: none"> 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 Theory Duration 90:00 Practical Duration 150:00	Unique Equipment Required: Different Types of Packaging Material, Conveyor, Hopper, Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Safety Manual, Packing Rolls, Shrink Packing Machine, Vacuum Packing Machine, Labeler, Sealer, Wrapping Machine, Log Books, Computer/Laptop	

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

Recommend OJT Hours: **90Hours, 0 Minutes**

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

Trainer Prerequisites for Job role: “Food Products Packaging Technician” mapped to Qualification Pack: “FIC/Q7001, 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/Q7001”, 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"> • M.Sc./M. Tech/ME in food Technology or Food Engineering with 1-2 years of hands on experience in a packaging industry, or • B. Sc. (home Sc.) /B. Tech./BE in food Technology or Food Engineering with 2-3 years of hands on experience in packaging industry, or • Diploma in food Technology or Food Engineering with 4 years of hand on experience in a packaging industry.
4a	Domain Certification	Certified for Job Role: “Food Products Packaging Technician” mapped to QP: “FIC/Q7001, 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"> • M. Sc./M. Tech./ME in food Technology or Food Engineering with 1-2 years of hands on experience in a packaging industry, or • B.Sc. (home Sc.) /B. Tech./BE in food Technology or Food Engineering with 2-3 years of hands on experience in packaging industry, or • Diploma in food Technology or Food Engineering with 4 years of hand on experience in a packaging industry.

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Food Products Packaging technician
Qualification Pack	FIC/Q7001, 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	Out Of	Marks Allocation	
				Theory	Skills Practical
1. FIC/N7001: Prepare and maintain work area and machineries for packaging food products	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 processing		10	3	7
	PC3. Dispose waste materials as per defined SOPs and industry requirements		15	6	9
	PC4. Check the working and performance of all machineries and tools used for the process such as filter, homogenizer, pasteurizer, separator, clarifier, 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		15	5	10
	PC7. Attend the minor repairs/ faults of all machines, if required		7.5	2	5
	PC8. Select and set the machines and tools required for production		7.5	2.5	5
	Total		100	35	65
2. FIC/N7002: Prepare for packaging food products	PC1. Read and understand the work order from the supervisor	100	2	0.5	1.5
	PC2. Check the availability of packaging materials, equipment and manpower		2	0.5	1.5
	PC3. Calculate the packaging material requirement for all categories of packaging, such as primary, secondary and tertiary, for completing the order		2	0.5	1.5
	PC4. Ensure the working and performance of all machineries required for packaging		2	0.5	1.5
	PC5. Report to the supervisor on any malfunctions of machine		2	0.5	1.5
	PC6. Plan to utilize machineries effectively and save energy		2	1	1
	PC7. Calculate manpower requirement for completing the order		2	0.5	1.5
	PC8. Allot responsibilities/ work to the assistants and helpers		4	1.5	2.5
	PC9. Refer to the work order for categories of packing each food product		4	1.5	2.5
	PC10. Start machine and check the working condition and performance of the machine		4	1.5	2.5

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC11. Make minor adjustments or repairs, like opening valves, changing forming and cutting dies, setting guides, or clearing away damaged product container (as applicable)		5	2	3
	PC12. Move required packaging materials (like bottles, cans, pouches, paper, plastic sheet, boxes, cartons, tapes, straps, glue, ink, labels etc.) from warehouse to the packaging area		5	2	3
	PC13. Count the packaging material		5	2	3
	PC14. Check the packaging material quality to company standards, through physical parameters and by verifying the quality analysis report from the supplier/ internal lab analysis report, etc.		5	2	3
	PC15. Keep the tools accessible to attend repairs/ faults in case of breakdown		5	2	3
			100	35	65
3. FIC/N7003: Package food products	PC1. Feed food product to conveyors, hoppers or other feeding devices for packaging		2	0.5	1.5
	PC2. Feed the packaging materials (caps, pouches, bottles etc.) in the feeder/hopper of packaging machine		2	0.5	1.5
	PC3. Position the filling machine or hold container in the machine for filling/packaging food products		5	2	3
	PC4. Press pedal /button or move lever to seal/cap the filled packaging material		5	2	3
	PC5. Set controls and regulate speed of packaging line conveyor		2	0.5	1.5
	PC6. Start the conveyor and control speed such that the packaging material (bottle, pouch etc.) are positioned below the filling nozzle and products are filled to organization standard		2	0.5	1.5
	PC7. Remove packaged product (i.e. Primary packaging material) from the machine		2	1	1
	PC8. Check the weight of the packed pouch/containers and adjust controls if required		3	1	2
	PC9. Clean the surface of the filled/packed primary packaging material		3	1	2
	PC10. Glue/paste label on the primary packaging material(in case of bottles)		3	1	2

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC11. Inspect filled container for weight, height of packaging, physical parameters of product etc., to ensure that product is packaged according to specifications		3	1	2
	PC12. Check the quality of the secondary packaging materials (carton, crates, etc.) Through weight, ply, print, checking for damage, etc.		3	1	2
	PC13. Form the cartons or assemble crates		4	1	3
	PC14. Wrap protective materials around the primary container (if applicable)		2	1	1
	PC15. Place the filled primary packaging materials (bottles, pouches) manually in secondary packaging material (carton/crate)		3	1	2
	PC16. Set controls of the secondary packing machine		3	1	2
	PC17. Feed the cartons/crates in the packaging machine		2	0.5	1.5
	PC18. Start the secondary packaging line conveyor and control speed for positioning and placing the packed food products (primary packaged) in the secondary packaging material (carton/crate)		3	1	2
	PC19. Remove the packed secondary packaging material from the packaging machine		2	0.5	1.5
	PC20. Seal the packed cartons with tapes		3	1	2
	PC21. Paste labels or stencil information on container, such as lot number, shipping destination etc.		5	2	3
	PC22. Strap the cartons (if applicable)		3	1	2
	PC23. Weigh the cartons and inspect the packaging material for weight, deformation, any damage, etc. as per organization standards		3	1	2
	PC24. Store the packed containers following organization standards		2	0.5	1.5
	PC25. Check the quality of the tertiary packaging materials (pallets, shrink wrap, etc.) through weight, strength, check for damage, etc.		3	1	2
	PC26. Set the controls of the tertiary packing machine		5	2	3
	PC27. Feed the tertiary packaging materials in the packaging machine		2	0.5	1.5

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC28. Load the secondary packed product (packed cartons) in the packaging line conveyor		2	1	1
	PC29. Set controls, start, stop or regulate speed of packaging line conveyor for packing		3	1	2
	PC30. Remove tertiary packaged product from the packaging machine		2	0.5	1.5
	PC31. Weigh the pack and inspect the packaging material for weight, damage, etc. as per organization standards		3	0.5	2.5
	PC32. Store the packed containers following organization standards		2	1	1
	PC33. Clean the machineries used with recommended sanitizers following CIP procedure		2	1	1
	PC34. Clean the equipment and tools using recommended cleaning agents and sanitizers		2	1	1
	PC35. Clean and maintain work area and keep it free from dust, spillage, pests, etc.		1	0.5	0.5
	PC36. Attend minor repairs/faults of all machines (if any)		2	1	1
	PC37. 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
			100	35	65
4. FIC/Q7004: Complete documentation and record keeping related to packaging food products	PC1. Document and maintain records of details of raw materials and packaging materials as per organizational standards	100	15	9	6
	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 packed product to packaging materials, in case of quality concerns and during quality management system audits		5	3	2
	PC5. Document process details like type of packaging material used, types of products packed, category of packaging for all products packed,		23	14	9

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	packaging accessories, machine setting, machine parameters (like temperature, time etc. as applicable), wastage, energy utilization, etc. In process chart or production log for all products packed				
	PC6. Maintain record of observations (if any) or deviations related to process		5	3	2
	PC7. Load the process details in ERP for future reference		5	3	2
	PC8. Verify documents and track packed product to packaging materials, in case of quality concerns and for quality management system audits		5	3	2
	PC9. Document and maintain records of the packed products		2	1	1
	PC10. Document the packed products details such as name of the product packed, type and category of packaging, batch number, time of packing, date of manufacture, date of expiry, other label details, primary and secondary packaging materials for all packed products, storage conditions, etc., as per company standards		15	9	6
	PC11. Maintain record of observations or deviations (if any) related to packed products		5	3	2
	PC12. Load the packed product details in ERP for future reference		5	3	2
	PC13. Verify the documents and track from packed product to packaging materials, in case of quality concerns and for quality management system audits		5	3	2
	Total		100	60	40
5. FIC/N7005: Food Safety, hygiene and sanitation for packaging 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		10	4	6

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	them in designated area free from pests, flies etc.				
	PC5. Clean, maintain and monitor food processing equipment periodically, using it only for the specified purpose		5	2	3
	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
	PC 16. 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%	