



#### QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR FOOD PROCESSING

# What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- > OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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#### Introduction

### **Qualifications Pack – Baking Technician/Operative**

**SECTOR: FOOD PROCESSING** 

**SUB-SECTOR: BREAD AND BAKERY** 

**OCCUPATION: BAKING TECHNICIAN/OPERATIVE** 

**REFERENCE ID**: FIC/Q5005

**ALIGNED TO:** NCO-2004/7412.20

A Baking Technician / Operative is responsible for baking of products and maintaining their consistency and quality.

**Brief Job Description:** A Baking Technician / Operative is responsible for baking of products, maintaining their consistency and quailty, while meeting defined SOPs and leveraging his/ her skill to operate ovens in synchronisation with proof box/ rest of the plant/ unit.

**Personal Attributes:** A Baking Technician / Operative must have the ability to plan, organize, prioritize, calculate and handle pressure. S/he must possess reading, writing and communication skills. In addition, the individual must have stamina to be able to stand for long hours, have personal and professional hygiene and an understanding of food safety standards and requirements.







Qualifications Pack Code	FIC/Q5005		
Job Role	Baking Technician/Operatrive		
Credits (NSQF)	TBD	Version number	1.0
Sector	Food Processing	Drafted on	23/06/2015
Sub-sector	Bread and bakery	Last reviewed on	03/07/2015
Occupation	Processing	Next review date	02/07/2016

Job Role	Baking Techinican/Operative
Role Description	A Baking Technician / Operative is responsible for baking of products, maintaining their consistency and quailty, while meeting defined SOPs and leveraging his/ her skill to operate ovens in synchronisation with proof box/ rest of the plant/ unit.
NSQF level	4
Minimum Educational Qualifications	Preferably after Class 10
Maximum Educational Qualifications	Not Applicable
Training (Suggested but not mandatory)	1. Baking process for all baked process 2. Training on food standards for baked products 3. Operating different types of baking ovens 4. GMP 5. HACCP 6. QMS 7. Computer basics 8. Training in food Safety Standards and Regulations (as per FSSAI) (Mandatory)
Experience	2-3 years experience in a bakery unit
Applicable National Occupational Standards (NOS)	Compulsory:  1. FIC/N5017 Prepare and maintain work area and machineries for baking products in the oven  2. FIC/N5018 Prepare for baking products in the oven  3. FIC/N5019 Bake bakery products in the oven  4. FIC/N5020 Complete documentation and record keeping related to baking products in the oven  5. FIC/N9001 Food safety, hygiene and sanitation for processing food products  Optional:  Not applicable
Performance Criteria	As described in the relevant OS units



#### Qualifications Pack For Baking Technician/Operative



Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses 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.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
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 they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance	Performance Criteria are statements that together specify the standard of
Criteria	performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification 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.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization 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 or Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working 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.





#### Qualifications Pack For Baking Technician/Operative



Keywords /Terms	Description
CIP	Clean In Place
COP	Clean Out Of Place
ERP	Enterprise Resource Planning
FIFO	First In First Out
FEFO	First Expiry First Out
FSSAI	Food Safety and Standards Authority of India
GMP	Good Manufacturing Practices
GHP	Good Hygiene Practices
HACCP	Hazard Analysis and Critical Control Point
NOS	National Occupational Standard
NSQF	National Skill Qualification Framework
NVEQF	National Vocational Educational Qualification Framework
NVQF	National Vocational Qualification Framework
OS	Occupational Standard
PC	Performance Criteria
QP	Qualification Pack
SSC	Sector Skill Council
SOP	Standard Operating Procedure
QMS	Quality Management System







Prepare and maintain work area and machineries for baking products in the oven

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# National Occupational Standard



### **Overview**

This OS unit is about preparing work area for hygiene and safety, and ensuring performance, efficiency and maintenance of process machineries and tools for baking products in the oven, as per the specifications and standards of the organization.







Unit Code	FIC/N5017
Unit Title(Task)	Prepare and maintain work area and process machineries for baking products in the oven
Description	This unit is about preparing work area for hygiene and safety, and ensuring performance, efficiency and maintenance of process machineries and tools for baking products in the oven, as per the specifications and standards of the organization.
Scope	<ul> <li>This unit/task covers the following:</li> <li>Prepare and maintain work area (for baking products in the oven)</li> <li>Prepare and maintain process machineries and tools (for baking products in the oven)</li> </ul>
Performance Criteria(P	C) w.r.t. the Scope
Element	Performance Criteria
Prepare and maintain work area (for baking products in the oven)	PC1. clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests  PC2. ensure that the work area is safe and hygienic for food processing  PC3. dispose waste materials as per defined SOPs and industry requirements
Prepare and maintain process machineries and tools (for baking products in the oven)	PC4. check the working and performance of all machineries and tools used for production PC5. clean the machineries and tools used with approved sanitizers following specifications and SOPs PC6. place the necessary tools required for the process PC7. attend minor repairs/ faults of machines, if required
Knowledge and Unders	standing (K)
A. Organizational Context (Knowledge of the organization and its processes)	<ul> <li>The user/individual on the job needs to know and understand:</li> <li>KA1. organization standards, process standards and procedures followed in the organization</li> <li>KA2. types of products produced by the organization</li> <li>KA3. code of business conduct</li> <li>KA4. dress code to be followed</li> <li>KA5. job responsibilities/duties and standard operating procedures</li> <li>KA6. internal processes such as procurement, store management, inventory management, quality management and key contact points for query resolution</li> <li>KA7. provision of wages, working hours as per organization policy</li> <li>KA8. food safety and hygiene standards followed</li> </ul>
B. Technical Knowledge	<ul> <li>The user/individual on the job needs to know and understand:</li> <li>KB1. types of chemicals, materials and equipment required for cleaning and maintenance</li> <li>KB2. cleaning process to disinfect equipment/ tools</li> <li>KB3. knowledge on Food Safety Standards and Regulations (as per FSSAI)</li> <li>KB4. supplier/manufacturers instructions related to cleaning and maintenance</li> <li>KB5. knowledge on legal regulations pertaining to work place such as health and safety, recommended dosage for use of sanitizers, control of substances hazardous to health, handling/storage/ disposal/ cautions for use of sanitizers</li> </ul>







	and disinfectants, fire precautions/ occurrences, hygiene practice, disposal of
01.111(0)	waste, environmental protection, etc.
Skills (S)	
A. Core Skills/	Writing Skills
Generic Skills	The user/ individual on the job needs to know and understand how to:
	SA1. note the information communicated by the supervisor
	SA2. note the raw materials used for production and the finished products
	produced SA3. note the readings of the process parameters and provide necessary
	information to fill the process chart
	SA4. note down observations (if any) related to the process
	SA5. write information documents to internal departments/ internal teams
	SA6. note down the data for ERP or as required by the organization
	Reading Skills
	The user/individual on the job needs to know and understand how to:
	SA7. read and interpret the process required for producing various types of
	products
	SA8. read and interpret and process flowchart for all products produced
	SA9. read equipment manuals and process documents to understand the
	equipment operation and process requirement
	SA10. read internal information documents sent by internal teams
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:
	SA11. discuss task lists, schedules and activities with the supervisor
	SA12. effectively communicate with the team members
	SA13. question the supervisor in order to understand the nature of the problem and
	to clarify queries
	SA14. attentively listen and comprehend the information given by the speaker
	SA15. communicate clearly with the supervisor and cross department team on the issues faced
B. Professional Skills	Decision Making
b. Professional Skills	The user/individual on the job needs to know and understand how to:
	SB1. analyse critical points in day to day tasks through experience and observation
	and identify control measures to solve the issue
	SB2. handle issues in case the supervisor is not available (as per the authority
	matrix defined by the organization)
	Plan and Organize
	The user/individual on the job needs to know and understand how to:
	SB3. plan and organize the work order and jobs received from the supervisor
	SB4. organize raw materials and packaging materials required for all products
	following the instruction provided by the supervisor
	SB5. plan and prioritize the work based on the instructions received from the
	supervisor
	SB6. plan to utilise time and equipment's effectively
	SB7. organize all process/ equipment manuals so as to access information easily







SB8. support the supervisor in scheduling tasks for helper(s)

#### **Customer Centricity**

The user/individual on the job needs to know and understand how to: SB9. understand customer requirements and their priority and respond as per their needs

#### **Problem Solving**

SB10. support supervisor in solving problems by detailing out problems SB11. discuss the possible solutions with the supervisor for problem solving

#### **Analytical Thinking**

The user/individual on the job needs to know and understand how to:

SB12. apply domain information about maintenance processes and technical knowledge about tools and equipment

#### **Critical Thinking**

The user/individual on the job needs to know and understand how to:

- SB13. use common sense and make judgments on day to day basis
- SB14. use reasoning skills to identify and resolve basic problems
- SB15. use intuition to detect any potential problems which could arise during operations
- SB16. use acquired knowledge of the process for identifying and handling issues





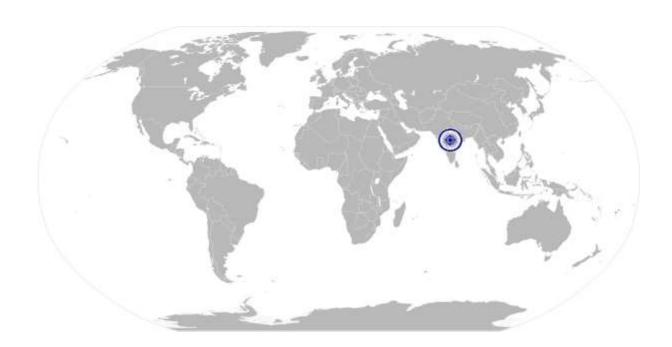




# **NOS Version Control**

NOS Code		FIC/N5017	
Credits (NSQF)	TBD	Version number	1.0
Industry	Food Processing	Drafted on	23/06/2015
Industry Sub-sector	Bread and Bakery	Last reviewed on	03/07/2015
Occupation	Processing	Next review date	02/07/2016

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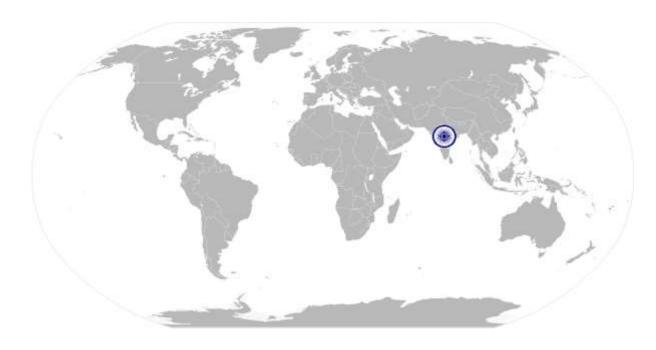




Prepare for baking products in the oven

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# National Occupational Standard



## **Overview**

This OS unit is about preparation of baking various bakery products in an oven through planning production, equipment utilization and manpower; and preparing proof box and oven.







## Prepare for baking products in the oven

Unit Code	FIC/N5018		
Unit Title(Task)	Prepare for the baking products in an oven		
Description Scope	This unit is about preparation of baking various bakery products in an oven through planning production, equipment utilization and manpower; and preparing proof box and oven  The scope of this role will include:  Plan production (for baking products in an oven)  Plan equipment utilization and manpower (for baking products in an oven)  Organize equipment (for baking products in an oven)		
Performance Criteria(P	PC) w.r.t. the Scope		
Element	Performance Criteria		
Plan Production (for baking products in an oven)	<ul> <li>PC1. read and understand the production order from the supervisor</li> <li>PC2. plan production sequence by: <ul> <li>grouping products that need to be baked immediately after mixing/creaming</li> <li>grouping similar kind of products (e.g., fermented products such as bread, buns, puff etc.)</li> <li>grouping products that require same process parameters like baking temperature, time etc.</li> <li>grouping products that require proofing process</li> <li>group products that does not impact the quality of the other when baked together</li> <li>planning maximum capacity utilization of machineries</li> <li>prioritizing urgent orders</li> </ul> </li> </ul>		
Plan equipment utilization and manpower (for baking products in an oven)	<ul> <li>PC3. check the working and performance of each equipment required for process, particularly the fuel flow and burner, proofer/ oven, conveyor, control panel, etc.</li> <li>PC4. calculate the process time for each batch for effective utilization of machineries</li> <li>PC5. plan to utilize machineries for multiple products without affecting the quality of the finished products, and to optimize production and saving energy</li> <li>PC6. allot responsibilities/ work to the assistants and helpers</li> </ul>		
Organize equipment (for baking products in an oven)	PC7. refer to the process chart/ product flow chart for product(s) baked PC8. organize required oven racks/pans PC9. arrange required cooling racks PC10. prepare the proof box by setting parameters such as temperature, humidity, etc. PC11. prepare and calibrate oven (in case of batch operation) by pre-heating the oven to the specified temperature as per the oven chart		
	PC12. prepare the conveyor (in case of continuous operation) by setting the speed		







## Prepare for baking products in the oven

	of conveyor, baking time, and temperature controls  PC13. ensure working and performance of equipments by starting equipment(s), and observing gauges to maintain heat according to specifications  PC14. keep the tools accessible to attend minor repairs/faults in case of breakdown  PC15. handle emergency situations (e.g.: fire, power failure ) while baking
Knowledge and Unders	standing (K)
B. Organizational Context (Knowledge of the organization and its processes)	the user/individual on the job needs to know and understand:  KA1. organization standards, process standards and procedures followed in the organization  KA2. types of products produced by the organization  KA3. code of business conduct  KA4. dress code to be followed  KA5. job responsibilities/duties and standard operating procedures  KA6. internal processes such as procurement, store management, inventory management, quality management and key contact points for query resolution  KA7. provision of wages, working hours as per organization policy  KA8. food safety and hygiene standards followed
B. Technical Knowledge	The user/individual on the job needs to know and understand:  KB1. types of raw materials (dough/batter) and various baked products  KB2. types of fuels (diesel, etc.)  KB3. types of oven baking process - continuous and batch baking  KB4. various types of oven used for baking and ovens used in the organization  KB5. handling of all types of ovens and oven operation (continuous/batch), and proof box  KB6. maintenance of process equipments (oven, proof box)  KB7. supplier/manufacturers instructions related to machineries  KB8. process and process parameters for each product handled  KB9. basic mathematics  KB10. quality parameters  KB11. food safety and hygiene  KB12. GMP  KB13. HACCP
Skills (S)	NB13.TIMEGI
Core Skills/ Generic Skills	Writing Skills  The user/ individual on the job needs to know and understand how to:  SA1. note the information communicated by the supervisor  SA2. note the raw materials used for production and the finished products produced  SA3. note the readings of the process parameters and provide necessary information to fill the process chart  SA4. note down observations (if any) related to the process  SA5. write information documents to internal departments/ internal teams  SA6. note down the data for ERP or as required by the organization
	Reading Skills







#### Prepare for baking products in the oven

	The user/individual on the job needs to know and understand how to:
	SA7. read and interpret the process required for producing various types of
	products
	SA8. read and interpret and process flowchart for all products produced
	SA9. read equipment manuals and process documents to understand the
	equipment operation and process requirement
	SA10. read internal information documents sent by internal teams
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:
	SA11. discuss task lists, schedules and activities with the supervisor
	SA12. effectively communicate with the team members
	SA13. question the supervisor in order to understand the nature of the problem and
	to clarify queries
	SA14. attentively listen and comprehend the information given by the speaker
	SA15. communicate clearly with the supervisor and cross department team on the
	issues faced
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to:
	SB1. analyse critical points in day to day tasks through experience and observation
	and identify control measures to solve the issue
	SB2. handle issues in case the supervisor is not available (as per the authority
	matrix defined by the organization
	Plan and Organize
	The user/individual on the job needs to know and understand how to:
	SB3. plan and organize the work order and jobs received from the supervisor
	SB4. organize raw materials and packaging materials required for all products
	following the instruction provided by the supervisor
	SB5. plan and prioritize the work based on the instructions received from the
	supervisor
	SB6. plan to utilise time and equipment's effectively SB7. organize all process/ equipment manuals so as to access information easily
	SB8. support the supervisor in scheduling tasks for helper(s)
	Customer Centricity  The user/individual on the job needs to know and understand how to:
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	SB9. understand customer requirements and their priority and respond as per their needs
	Problem Solving
	SB10. support supervisor in solving problems by detailing out problems
	SB11. discuss the possible solutions with the supervisor for problem solving
	Analytical Thinking
	The user/individual on the job needs to know and understand how to:
	SB12. apply domain information about maintenance processes and technical
	knowledge about tools and equipment
	Critical Thinking
	The user/individual on the job needs to know and understand how to:
	,

SB13. use common sense and make judgments on day to day basis SB14. use reasoning skills to identify and resolve basic problems







## Prepare for baking products in the oven

SB15. use intuition to detect any potential problems which could arise during
operations
SB16. use acquired knowledge of the process for identifying and handling issues









#### Prepare for baking products in the oven

## **NOS Version Control**

NOS Code	FIC/N5018		
Credits (NSQF)	TBD	Version number	1.0
Industry	Food Processing	Drafted on	23/06/2015
Industry Sub-sector	Bread and Bakery	Last reviewed on	03/07/2015
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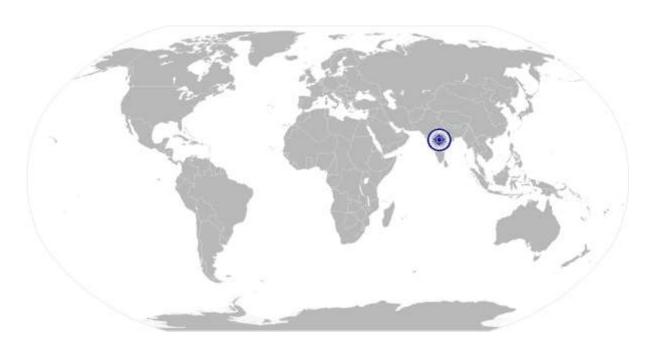






Bake bakery products in the oven

# National Occupational Standard



## **Overview**

This OS unit is about producing various baked products in the oven.



# National Occupational Standards



#### FIC/N5019

#### Bake bakery products in the oven

Unit Code	FIC/N5019
Unit Title(Task)	Bake bakery products in the oven
Description	This unit is about producing various baked products in the oven.
Scope	The scope of this role will include:  • Handle proofing ( in case of bread preparation)  • Baking in oven  • Post production cleaning and regular maintenance of equipments
Performance Criteria(P	C) w.r.t. the Scope
Element	Performance Criteria
Handle proofing( in case of bread preparation)	PC1. set the proof box to the required temperature and humidity following the proofing chart, as per specifications and organization standards PC2. refer to the production chart/proofing chart to understand the loading sequence PC3. load the proof box following the production sequence PC4. monitor proof box parameters such as temperature/humidity PC5. monitor product in the proof box PC6. pull bread at specified heights from proof box PC7. monitor the proof box and product coming out of the proof box
Baking in oven	<ul> <li>PC8. pre-heat the oven to specified temperature and check humidity level (if specified)</li> <li>PC9. refer to the production chart/proofing chart to understand the loading sequence and process parameters for each product baked</li> <li>PC10. set the oven parameters such as baking temperature and time for the product baked</li> <li>PC11. observe filled baking pans (to be loaded in oven) to determine whether pans are filled to standard</li> <li>PC12. load the ovens with filled baking pans and check that the dough pieces are placed corner to corner</li> <li>PC13. observe spacing between pans as per defined SOPs</li> <li>PC14. monitor and control speed of conveyor to control pans entering oven and to control baking time of various baking product (in continuous operation)</li> <li>PC15. monitor oven parameters such as temperature and time during baking process</li> <li>PC16. observe colour of the baking product to detect under/ over baking and to achieve finished product of uniform quality</li> <li>PC17. unload the oven when the baking process is complete</li> <li>PC18. check the quality of the product through sensory parameters such as colour, size, appearance, texture, aroma. etc.</li> <li>PC19. unload the pans/trays using proper technique (this must be done immediately after being taken out of the oven to improve the overall shape of the bread)</li> <li>PC20. place baked product on the cooling racks and transfer to the cooling room/cooling area</li> </ul>







#### Bake bakery products in the oven

	PC21. remove excess waste from the baking pans	
	PC22. stack the emptied baking pans in the designated area	
	PC23. ensure that empty pans are stored appropriately to avoid damage and	
	contamination	
	PC24. adjust or reset controls of the oven to load the next batch product	
	PC25. report discrepancies/concerns in each stage of production to department	
	supervisor for immediate action	
Post production	PC26. clean the work area, machineries, equipment and tools using recommended	
cleaning and regular	cleaning agents and sanitizers	
maintenance of	PC27. attend minor repairs/faults of all machines (if any)	
equipments	PC28. ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual)	
	maintenance of all machines and equipment following the SOP or following	
	suppliers instructions/manuals	
Knowledge and unders	tanding (k)	
C. Organizational	the user/individual on the job needs to know and understand:	
Context	KA1. organization standards, process standards and procedures followed in the	
(Knowledge of the	organization	
organization and	KA2. types of products produced by the organization	
its processes)	KA3. code of business conduct	
	KA4. dress code to be followed	
	KA5. job responsibilities/duties and standard operating procedures	
	KA6. internal processes such as procurement, store management, inventory	
	management, quality management and key contact points for query	
	resolution	
	KA7. provision of wages, working hours as per organization policy	
	KA8. food safety and hygiene standards followed	
B. Technical	the user/individual on the job needs to know and understand:	
Knowledge	KB1. knowledge of fuels and oven heating systems	
	KB2. types of raw materials (dough/batter) and various baked products	
	KB3. under proofed / over proofed dough	
	KB4. types of oven baking process - continuous and batch baking	
	KB5. various types of oven used for baking and ovens used in the organization	
	KB6. handling all types of ovens and oven operation (continuous/batch), and proof	
	box	
	KB7. maintenance of process equipments (oven, proof box)	
	KB8. supplier/manufacturers instructions related to machineries	
	KB9. process and process parameters for each product handled	
	KB10. cooling procedures for all products handled	
	KB11. storage procedures for raw materials and finished goods	
	KB12. cleaning procedures such as CIP and COP	
	KB13. knowledge of sanitizers and disinfectants and its handling and storing methods	
	KB14. fire safety	
	KB15. hand in machine safety	
	KB15. food laws and regulations on product, packaging and labelling	
	KB17. quality parameters	
	KB18. food safety and hygiene and orientation to process and product quality	
	KD10. 1000 safety and hygiene and offentation to process and product quality	







#### Bake bakery products in the oven

	KB19. GMP		
	KB20. HACCP		
Skills (S)			
B. Core Skills/	Writing Skills		
Generic Skills	The user/ individual on the job needs to know and understand how to:		
	SA1. note the information communicated by the supervisor		
	SA2. note the raw materials used for production and the finished products		
	produced		
	SA3. note the readings of the process parameters and provide necessary		
	information to fill the process chart SA4. note down observations (if any) related to the process		
	SA5. write information documents to internal departments/ internal teams		
	SA6. note down the data for ERP or as required by the organization		
	Reading Skills		
	The user/individual on the job needs to know and understand how to:		
	SA7. read and interpret the process required for producing various types of		
	products		
	SA8. read and interpret and process flowchart for all products produced		
	SA9. read equipment manuals and process documents to understand the		
	equipment operation and process requirement		
	SA10. read internal information documents sent by internal teams  Oral Communication (Listening and Speaking skills)		
	The user/individual on the job needs to know and understand how to:  SA11. discuss task lists, schedules and activities with the supervisor  SA13. effectively communicate with the team members		
	SA12. effectively communicate with the team members SA13. question the supervisor in order to understand the nature of the problem and to clarify queries		
	SA14. attentively listen and comprehend the information given by the speaker		
	SA15. communicate clearly with the supervisor and cross department team on the		
	issues faced		
B. Professional Skills	Decision Making		
	The user/individual on the job needs to know and understand how to:		
	SB1. analyse critical points in day to day tasks through experience and observation		
	and identify control measures to solve the issue		
	SB2. handle issues in case the supervisor is not available (as per the authority		
	matrix defined by the organization)		
	Plan and Organize The user/individual on the job needs to know and understand how to:		
	SB3. plan and organize the work order and jobs received from the supervisor		
	SB4. organize raw materials and packaging materials required for all products		
	following the instruction provided by the supervisor		
	SB5. plan and prioritize the work based on the instructions received from the		
	supervisor		
	SB6. plan to utilise time and equipment's effectively		
	SB7. organize all process/ equipment manuals so as to access information easily		
	SB8. support the supervisor in scheduling tasks for helper(s)		
	Customer Centricity		







#### Bake bakery products in the oven

The user/individual on the job needs to know and understand how to:

SB9. understand customer requirements and their priority and respond as per their needs

#### **Problem Solving**

SB10. support supervisor in solving problems by detailing out problems SB11. discuss the possible solutions with the supervisor for problem solving

#### **Analytical Thinking**

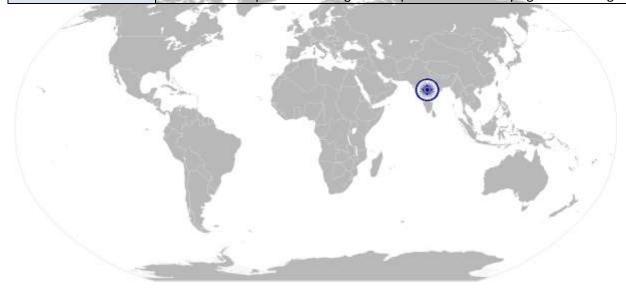
The user/individual on the job needs to know and understand how to:

SB12. apply domain information about maintenance processes and technical knowledge about tools and equipment

#### **Critical Thinking**

The user/individual on the job needs to know and understand how to:

- SB13. use common sense and make judgments on day to day basis
- SB14. use reasoning skills to identify and resolve basic problems
- SB15. use intuition to detect any potential problems which could arise during operations
- SB16. use acquired knowledge of the process for identifying and handling issues







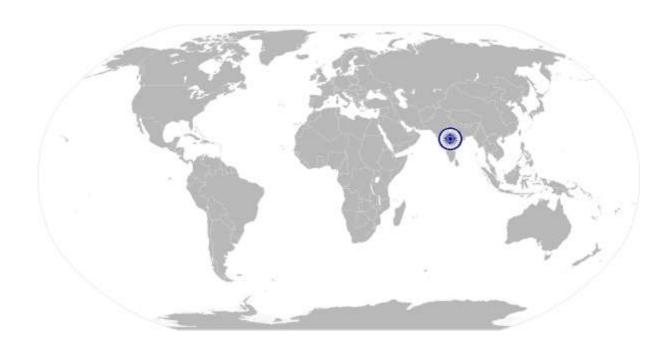


#### Bake bakery products in the oven

# **NOS Version Control**

NOS Code	FIC/N5019		
Credits (NSQF)	TBD	Version number	1.0
Industry	Food Processing	Drafted on	23/06/2015
Industry Sub-sector	Bread and Bakery	Last reviewed on	03/07/2015
Occupation	Processing	Next review date	02/07/2016

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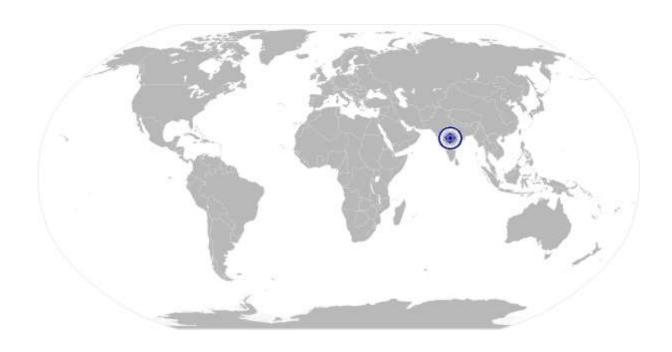






Complete documentation and record keeping related to baking products in the oven

# National Occupational Standard



## **Overview**

This OS unit is about documenting and maintaining records of raw materials, process and finished products related to baking products in the oven.







# Complete documentation and record keeping related to baking products in the oven

Unit Code	FIC/N5020		
Unit Title(Task)	Documentation and record keeping related to baking products in the oven.		
Description	This unit is about documenting and maintaining records of raw materials, process and finished products related to baking products in the oven.		
Scope	<ul> <li>This unit/task covers the following:         <ul> <li>Document and maintain record of raw material (related to baking products in the oven)</li> <li>Document and maintain record of production schedule and process parameters (related to baking products in the oven)</li> <li>Document and maintain record of finished products (related to baking products in the oven)</li> </ul> </li> </ul>		
Performance Criteria(I	PC) w.r.t. the Scope		
Element	Performance Criteria		
Document and maintain record of raw material (related to baking products in the oven)  Document and maintain record of production schedule and process parameters (related to baking products in the oven)	PC1. record details of all raw materials handled (dough/batter) and document the raw material details such as raw materials handled, condition and weight of the raw material while receiving, after proofing process, before loading in oven etc., as per company standards.  PC2. maintain record of observations (if any) related to raw materials, packaging materials  PC3. verify the documents and track them from finished product to raw materials, in case of quality concerns, and during quality management system audit  PC4. document production plan with details such as the product details, production sequence, equipments and machinery details, efficiency and capacity utilization of equipment  PC5. document process details such as type of raw material used, process parameters (temperature, time etc. as applicable) for entire process handled in process chart or production log for all products produced  PC6. document batch size, raw material used, yield after each stage of process, wastage, energy utilization and final products produced  PC7. maintain record of observations (if any) or deviations related to process and production		
Document and maintain record of finished products	PC8. verify documents and track them from finished product to raw material/s  PC9. document and maintain records of the types of finished products  PC10. document the finished products details such as weight of product, baking time, cooling condition, cooling time, batch number, time of packing, quality parameters (physical parameters), bath number, date of manufacture, date of expiry, other label details etc., as per company standards  PC11. maintain record of observations or deviations (if any) related to finished products  PC12. verify the documents and track from finished product to raw materials, in case of quality concerns and for quality management system audit		
Knowledge and Under	standing (K)		







# Complete documentation and record keeping related to baking products in the oven







# Complete documentation and record keeping related to baking products in the oven

	SA14. attentively listen and comprehend the information given by the speaker		
	SA15. communicate clearly with the supervisor and cross department team on the		
	issues faced		
B. Professional Skills	Decision Making		
	The user/individual on the job needs to know and understand how to:		
	SB1. analyse critical points in day to day tasks through experience and observation		
	and identify control measures to solve the issue		
	SB2. handle issues in case the supervisor is not available (as per the authority		
	matrix defined by the organization)		
	Plan and Organize		
	The user/individual on the job needs to know and understand how to:		
	SB3. plan and organize the work order and jobs received from the supervisor		
	SB4. organize raw materials and packaging materials required for all products		
	following the instruction provided by the supervisor		
	SB5. plan and prioritize the work based on the instructions received from the		
	supervisor		
	SB6. plan to utilise time and equipment's effectively		
	SB7. organize all process/ equipment manuals so as to access information easily		
	SB8. support the supervisor in scheduling tasks for helper(s)		
	Customer Centricity		
	The user/individual on the job needs to know and understand how to:		
	SB9. understand customer requirements and their priority and respond as per		
	their needs		
	Problem Solving		
	SB10. support supervisor in solving problems by detailing out problems		
	SB11. discuss the possible solutions with the supervisor for problem solving		
	Analytical Thinking		
	The user/individual on the job needs to know and understand how to:		
	SB12. apply domain information about maintenance processes and technical		
	knowledge about tools and equipment		
	Critical Thinking		
	The user/individual on the job needs to know and understand how to:		
	SB13. use common sense and make judgments on day to day basis		
	SB14. use reasoning skills to identify and resolve basic problems		
	SB15. use intuition to detect any potential problems which could arise during		
	operations		
	SB16. use acquired knowledge of the process for identifying and handling issues		







# Complete documentation and record keeping related to baking products in the oven

# **NOS Version Control**

NOS Code	FIC/N5020		
Credits (NSQF)	TBD	Version number	1.0
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Occupation	Processing	Next review date	02/07/2016

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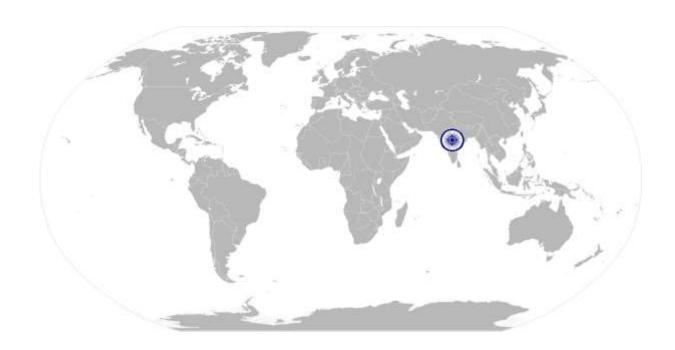






Food safety, hygiene and sanitation for processing food products

# National Occupational Standard



## **Overview**

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







#### FIC/N9001 Food safety, hygiene and sanitation for processing food products

Unit Code	FIC/N9001		
Unit Title(Task)	Food safety, hygiene and sanitation for processing food products		
Description	This unit is about maintaining food safety, hygiene and sanitation in work area and processing unit, for processing food products.		
Scope	<ul> <li>The scope of this role will include:</li> <li>Perform safety and sanitation related functions ( for processing food products)</li> <li>Apply food safety practices ( for processing food products)</li> </ul>		
Performance Criteria(P	C) w.r.t. the Scope		
Element	Performance Criteria		
Perform safety and sanitation related functions (for processing food products)	PC1. comply with food safety and hygiene procedures followed in the organization PC2. ensure personal hygiene by using of gloves, hairnets, masks, ear plugs, goggles, shoes, etc.  PC3. ensure hygienic production of food by inspecting raw materials, ingredients, finished products, etc. for compliance to physical, chemical and microbiological parameters  PC4. pack products in appropriate packaging materials, label and store them in designated area, free from pests, flies and infestations  PC5. clean, maintain and monitor food processing equipment periodically, using it only for the specified purpose  PC6. use safety equipment such as fire extinguisher, first aid kit and eye-wash station when required  PC7. follow housekeeping practices by having designated area for materials/tools  PC8. follow industry standards such as GMP and HACCP and product recall process  PC9. attend training on hazard management to understand types of hazards such as physical, chemical and biological hazards and measures to control and prevent them  PC10. identify, document and report problems such as rodents and pests to management  PC11. conduct workplace checklist audits before and after work to ensure safety and hygiene  PC12. document and maintain raw material, packaging material, process and finished products for the credibility and effectiveness of the food safety control system		
Apply food safety practices (for processing food products)	PC13. determine the quality of food using criteria such as aroma, appearance, taste and best before date, and take immediate measures to prevent spoilage PC14. store raw materials, finished products, allergens separately to prevent cross-contamination PC15. label raw materials and finished products and store them in designated storage areas according to safe food practices PC16. follow stock rotation based on FEFO/FIFO		
Knowledge and Unders	standing (K)		
E. Organizational Context	The user/individual on the job needs to know and understand: KA1. organization standards, process standards and procedures followed in the		







FIC/N9001 Fo	od safety, hygiene and sanitation for processing food products
(Knowledge of the	organization
organization and	KA2. types of products produced by the organization
its processes)	KA3. code of business conduct
nto processes;	KA4. dress code to be followed
	KA5. job responsibilities/duties and standard operating procedures
	KA6. internal processes such as procurement, store management, inventory
	management, quality management and key contact points for query
	resolution
	KA7. provision of wages, working hours as per organization policy
D. Tankainal	KA8. food safety and hygiene standards followed
B. Technical	The user/individual on the job needs to know and understand:
Knowledge	KB1. possible physical, chemical and biological hazards and methods of prevention of various hazards
	KB2. personal hygiene requirement
	KB3. different types of sanitizers used for process area, equipment and the
	procedure to use them
	KB4. knowledge on Food Safety Standards and Regulations (as per FSSAI)
	KB5. quality parameters and quality assessment based on physical parameters,
	basic food microbiology
	KB6. labelling/marking requirements for raw materials, finished goods, stored
	materials, packaging materials and their designated storage area
	KB7. cleaning and sanitation of equipment and work area
	KB8. CIP and COP methods and procedures
	KB9. storage norms for raw materials, packaging material and finished products
	KB10. stock rotation of ingredients and finished products based on FEFO/FIFO
	KB11. method of maintaining safety check lists for all machineries KB12. GHP
	KB12. GMP
	KB14. HACCP
Skills (S)	RB14. HACCE
D. Core Skills/	Writing Skills
Generic Skills	The user/ individual on the job needs to know and understand how to:
	SA1. note the information communicated by the supervisor
	SA2. note the raw materials used for production and the finished products
	produced
	SA3. note the readings of the process parameters and provide necessary
	information to fill the process chart
	SA4. note down observations (if any) related to the process
	SA5. write information documents to internal departments/ internal teams
	SA6. note down the data for ERP or as required by the organization
	Reading Skills
	The user/individual on the job needs to know and understand how to:
	SA7. read and interpret the process required for producing various types of products
	SA8. read and interpret and process flowchart for all products produced
	SA9. read equipment manuals and process documents to understand the
	equipment operation and process requirement
	SA10. read internal information documents sent by internal teams
	57.10. Tead internal information documents sent by internal teams

Oral Communication (Listening and Speaking skills)







FIC/N9001 Fo	od safety, hygiene and sanitation for processing food products	
	The user/individual on the job needs to know and understand how to:	
	SA11. discuss task lists, schedules and activities with the supervisor	
	SA12. effectively communicate with the team members	
	SA13. question the supervisor in order to understand the nature of the problem and	
	to clarify queries	
	SA14. attentively listen and comprehend the information given by the speaker	
	SA15. communicate clearly with the supervisor and cross department team on the	
	issues faced	
B. Professional Skills	Decision Making	
	The user/individual on the job needs to know and understand how to:	
	SB1. analyse critical points in day to day tasks through experience and observation	
	and identify control measures to solve the issue	
	SB2. handle issues in case the supervisor is not available (as per the authority	
	matrix defined by the organization)	
	Plan and Organize	
	The user/individual on the job needs to know and understand how to:	
	SB3. plan and organize the work order and jobs received from the supervisor	
	SB4. organize raw materials and packaging materials required for all products	
	following the instruction provided by the supervisor	
	SB5. plan and prioritize the work based on the instructions received from the	
	supervisor	
	SB6. plan to utilise time and equipment's effectively	
	SB7. organize all process/ equipment manuals so as to access information easily	
	SB8. support the supervisor in scheduling tasks for helper(s)	
	Customer Centricity	
	The user/individual on the job needs to know and understand how to:	
	SB9. understand customer requirements and their priority and respond as per	
	their needs (**)	
	Problem Solving	
	SB10. support supervisor in solving problems by detailing out problems	
	SB11. discuss the possible solutions with the supervisor for problem solving	
	Analytical Thinking	
	The user/individual on the job needs to know and understand how to:	
	SB12. apply domain information about maintenance processes and technical	
	knowledge about tools and equipment	
	Critical Thinking	
	The user/individual on the job needs to know and understand how to:	
	SB13. use common sense and make judgments on day to day basis	
	SB14. use reasoning skills to identify and resolve basic problems	
	SB15. use intuition to detect any potential problems which could arise during	
	operations	
	SB16. use acquired knowledge of the process for identifying and handling issues	







#### Food safety, hygiene and sanitation for processing food products

## **NOS Version Control**

NOS Code		FIC/N9001			
Credits (NSQF)	TBD	Version number	1.0		
Industry	Food Processing	Drafted on	23/06/2015		
Industry Sub-sector	Bread and Bakery	Last reviewed on	03/07/2015		
Occupation	Processing	Next review date	02/07/2016		

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#### **CRITERIA FOR ASSESSMENT OF TRAINEES**

<u>**Job Role**</u> Baking Technician/Operative

**Qualification Pack** FIC/Q5005

**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. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
- 4. Individual assessment agencies will create unique evaulations for skill practical for every student at each examination/training center based on this criteria
- 5. To pass the Qualification Pack , every trainee should score a minimum of 50% in every NOS and overall 50% pass percentage in every QP
- 6. To pass the Qualification Pack, every trainee should score a minimum of 33% in Theory and 50% in Practical
- 7. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

			Marks Allocation			
			Total Marks	Out Of	Theory	Skills Practical
1. FIC/N5017 (Prepare and maintain work area and machineries for baking products in	PC1.	Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests		25	10	15
the oven)	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	100	15	5	10
	PC4.	Check the working and performance of all machineries and tools used for production		15	5	10
	PC5.	Clean the machineries and tools used with approved sanitizers following specifications and SOPs		15	5	10
	PC6.	Place the necessary tools required for the process		5	2	3







	Assessment Criteria			
	PC7. Attend minor repairs/ faults of machines, if required	15	5	10
		100	35	65
2. FIC/N5018 (Prepare for baking products in the oven)	PC1. Read and understand the production order from the supervisor	10	4	6
	<ul> <li>PC2. Plan oven loading sequence by:</li> <li>Grouping products that need to be baked immediately after mixing/creaming</li> <li>Grouping similar kind of products (e.g fermented products such as bread, buns, puff etc.)</li> <li>Grouping products that require same process parameters like baking temperature, time etc.</li> <li>Grouping products that require proofing process</li> <li>Group products that does not impact the quality of the other when baked together</li> <li>Planning maximum capacity utilization of machineries</li> <li>Prioritizing urgent orders</li> </ul>	15	5	10
	PC3. Check the working and performance of each equipment required for process, particularly the fuel flow and burner, proofer/oven, conveyor, control panel, etc.	7.5	2.5	5
	PC4. Calculate the process time for each batch for effective utilization of machineries	7.5	2.5	5
	PC5. Plan to utilize machineries for multiple products without affecting the quality of the finished products, and to optimize production and saving energy	5	2	3
	PC6. Allot responsibilities/ work to the assistants and helpersRefer to the process chart/ product flow chart for product(s) baked	5	2	3
	PC7. Refer to the process chart/product flow chart for products baked	5	1	4







	PC8. Organize required oven racks/pans		5	1	4
	PC9. Arrange required cooling racks		5	1	4
	PC10. Prepare the proof box by setting parameters such as temperature, humidity, etc. Prepare and calibrate oven (in case of batch operation) by pre-heating the oven to the specified temperature as per the oven chart		10	4	6
	PC11. Prepare and calibrate oven (in case of batch operation) by preheating the oven to the specified temperature as per the oven chart		5	2	3
	PC12. Prepare the conveyor (in case of continuous operation) by setting the speed of conveyor, baking time, and temperature controls		5	2	3
	PC13. Ensure working and performance of equipments by starting equipment(s), and observing gauges to maintain heat according to specifications		5	2	3
	PC14. Keep the tools accessible to attend minor repairs/faults in case of breakdown		5	2	3
	PC15. Handle emergency situations (e.g.: fire, power failure ) while baking		5	2	3
			100	35	65
3. FIC/N5019 (Bake bakery products in the oven)	PC1. Set the proof box to the required temperature and humidity following the proofing chart, as per specifications and organization standards		5	2	3
	PC2. Refer to the production chart/proofing chart to understand the loading sequence	100	3	1	2
	PC3. Load the proof box following the production sequence		5	2	3
	PC4. Monitor proof box parameters such as temperature/humidity		5	2	3







	Assessment Citteria			
PC5.	Monitor product in the proof box	5	2	3
PC6.	Pull bread at specified heights from proof box	5	2	3
PC7.	Monitor the proof box and product coming out of the proof box	5	2	3
PC8.	Pre-heat the oven to specified temperature and check humidity level (if specified)	4	1	3
PC9.	Refer to the production chart/proofing chart to understand the loading sequence and process parameters for each product baked	3	1	2
PC10.	Set the oven parameters such as baking temperature and time for the product baked	3	1	2
PC11.	Observe filled baking pans (to be loaded in oven) to determine whether pans are filled to standard	3	1	2
PC12.	Load the ovens with filled baking pans and check that the dough pieces are placed corner to corner	2	0.5	1.5
PC13.	Observe spacing between pans as per defined SOPs	2	0.5	1.5
PC14.	Monitor and control speed of conveyor to control pans entering oven and to control baking time of various baking product (in continuous operation)	3	1	2
PC15.	Monitor oven parameters such as temperature and time during baking process	5	2	3
PC16.	Observe colour of the baking product to detect under/ over baking and to achieve finished product of uniform quality	5	2	3
PC17.	Unload the oven when the baking process is complete	3	1	2
PC18.	Check the quality of the product through sensory parameters such	5	2	3







	Assessment Criteria				
	as colour, size, appearance, texture, aroma. etc.				
	PC19. Unload the pans/trays using proper technique (this must be done immediately after being taken out of the oven to improve the overall shape of the bread)		3	1	2
	PC20. Place baked product on the cooling racks and transfer to the cooling room/cooling area		3	1	2
	PC21. Remove excess waste from the baking pans		3	1	2
	PC22. Stack the emptied baking pans in the designated area		3	1	2
	PC23. Ensure that empty pans are stored appropriately to avoid damage and contamination		2	0.5	1.5
	PC24. Adjust or reset controls of the oven to load the next batch product		4	1	3
	PC25. Report discrepancies/concerns in each stage of production to department supervisor for immediate action		3	1	2
	PC26. Clean the work area, machineries, equipment and tools using recommended cleaning agents and sanitizers		3	1	2
	PC27. Attend minor repairs/faults of all machines (if any)		2	0.5	1.5
	PC28. Ensure periodic (daily/weekly/monthly/quarterly/ half yearly/annual) maintenance of all machines and equipment following the SOP or following suppliers instructions/manuals		3	1	2
			100	35	65
4. FIC/N5020 (Complete documentation and record keeping related to baking	PC1. Record details of all raw materials handled (dough/batter) and document the raw material details such as raw materials handled, condition and weight of the raw	100	10	6	4







		Assessment Criteria			
products in the oven)		material while receiving, after proofing process, before loading in			
,		oven etc., as per company			
		standards.			
	PC2.	Maintain record of observations (if			
		any) related to raw materials,	5	3	2
		packaging materials			
	PC3.	Verify the documents and track			
		them from finished product to raw			
		materials, in case of quality concerns, and during quality	5	3	2
		management system audit			
	PC4.	Document production plan with			
		details such as the product details,			
		production sequence, equipments	4.5	0	7
		and machinery details, efficiency and capacity utilization of	15	8	7
		equipment			
	PC5.	Document process details such as			
	. 65.	type of raw material used, process			
		parameters (temperature, time			
		etc. as applicable) for entire	20	13	7
		process handled in process chart or production log for all products			
		produced			
	PC6.	Document batch size, raw material			
		used, yield after each stage of			
		process, wastage, energy	10	6	4
		utilization and final products produced			
	PC7.	Maintain record of observations (if			
		any) or deviations related to	5	3	2
		process and production	3	3	_
	PC8.	Verify documents and track them			
		from finished product to raw	5	3	2
		material/s			
	PC9.	Document and maintain records of	5	3	2
		the types of finished products	J	,	۷
	PC10.	Document the finished products			
		details such as weight of product, baking time, cooling condition,			
		cooling time, batch number, time	10	e	4
		of packing, quality parameters	10	6	4
		(physical parameters), bath			
		number, date of manufacture, date of expiry, other label details etc.,			
		or expiry, other label details etc.,			







	Assessment Criteria			
	as per company standards			
	PC11. Maintain record of observations or deviations (if any) related to finished products	5	3	2
	PC12. Verify the documents and track from finished product to raw materials, in case of quality concerns and for quality management system audit	5	3	2
		100	60	40
5. FIC/N9001(Food safety, hygiene and sanitation for processing food	PC1. Comply with food safety and hygiene procedures followed in the organization	5	2	3
products)	PC2. Ensure personal hygiene by using of gloves, hairnets, masks, ear plugs, goggles, shoes, 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 parameters	5	2	3
	PC4. Pack products in appropriate packaging materials, label and store them in designated area, free from pests, flies and infestations	10	4	6
	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, first aid kit and eyewash station when required	10	4	6
	PC7. Follow housekeeping practices by having designated area for materials/tools	5	2	3
	PC8. Follow industry standards such as GMP and HACCP and product recall process	10	4	6
	PC9. Attend training on hazard management to understand types of hazards such as physical, chemical and biological hazards and measures to control and	5	1	4







prevent them			
PC10. Identify, document and report problems such as rodents, pests and flies to management	5	1	4
PC11. Conduct workplace checklist audits before and after work to ensure safety and hygiene	5	1	4
PC12. Document and maintain raw material, packaging material, process and finished products for the credibility and effectiveness of the food safety control system	4	1	3
PC13. Determine the quality of food using criteria such as aroma, appearance, taste and best before date, and take immediate measures to prevent spoilage	5	2	3
PC14. Store raw materials, finished products, allergens separately to prevent cross-contamination	5	2	3
PC15. Label raw materials and finished products and store them in designated storage areas according to safe food practices	5	2	3
PC16. Follow stock rotation based on FEFO/ FIFO	10	4	6
	100	35	65