



COMPETENCY STANDARD

Industrial Food Preservation

Level: 03

(Agro-Food Sector)

Competency Standard Code: CS-AgFd-IFP -L-EN-V1



**National Skills Development Authority
Prime Minister's Office
Government of the People's Republic of Bangladesh**

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This Competency Standard for Industrial Food Preservation is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order to meet the qualification of individuals who graduated through the established standard via competency-based assessment for a relevant job.

This document has been developed by NSDA in association with Agro-Food Sector ISC, industry representatives, academia, related specialist, trainer and related employee.

Public and private institutions may use the information contained in this standard for activities benefitting Bangladesh.

Introduction

The NSDA aims to enhance an individual's employability by certifying completeness with skills. NSDA works to expand the skilling capacity of identified public and private training providers qualitatively and quantitatively. It also aims to establish and operationalize a responsive skills ecosystem and delivery mechanism through a combination of well-defined set of mechanisms and necessary technical supports.

Key priority economic growth sectors identified by the government have been targeted by NSDA to improve current job skills along with existing workforce to ensure required skills to industry standards. Training providers are encouraged and supported to work with industry to address identified skills and knowledge to enable industry growth and increased employment through the provision of market responsive inclusive skills training program. "Problem Solving with Python" is selected as one of the priority occupations of Agro-Food Sector . This standard is developed to adopt a demand driven approach to training with effective inputs from Industry Skills Councils (ISC's), employer associations and employers.

Generally, a competency standard informs curriculum, learning materials, assessment and certification of trainees enrolled in Skills Training. Trainees who successfully pass the assessment will receive a qualification in the National Skills Qualification Framework (NSQF) under Bangladesh National Qualification Framework (BNQF) and will be listed on the NSDA's online portal.

This competency standard is developed to improve skills and knowledge in accordance with the job roles, duties and tasks of the occupation and ensure that the required skills and knowledge are aligned to industry requirements. A series of stakeholder consultations, workshops were held to develop this document.

The document also details the format, sequencing, wording and layout of the Competency Standard for an occupation which is comprised of Units of Competence and its corresponding Elements.

Overview

A competency standard is a written specification of the knowledge, skills and attitudes required for the performance of an occupation, trade or job corresponding to the industry standard of performance required in the workplace.

The purpose of a competency standards is to:

- provide a consistent and reliable set of components for training, recognising and assessing people's skills, and may also have optional support materials
- enable industry recognised qualifications to be awarded through direct assessment of workplace competencies
- encourage the development and delivery of flexible training which suits individual and industry requirements
- encourage learning and assessment in a work-related environment which leads to verifiable workplace outcomes

Competency standards are developed by a working group comprised of representative from NSDA, Key Institutions, ISC, and industry experts to identify the competencies required of an occupation in Informal Sector.

Competency standards describe the skills, knowledge and attitude needed to perform effectively in the workplace. CS acknowledge that people can achieve technical and vocational competency in many ways by emphasizing what the learner can do, not how or where they learned to do it.

With competency standards, training and assessment may be conducted at the workplace or at training institute or any combination of these.

Competency standards consist of a number of units of competency. A unit of competency describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of competency are documented in a standard format that comprises of:

- unit title
- nominal duration
- unit code
- unit descriptor
- elements and performance criteria
- variables and range statement
- curricular content guide
- assessment evidence guides

Together, all the parts of a unit of competency:

- describe a work activity
- guide the assessor to determine whether the candidate is competent or not yet competent

The ensuing sections of this document comprise of a description of the relevant occupation, trade or job with all the key components of a unit of competency, including:

- a chart with an overview of all Units of Competency for the relevant occupation, trade or job including the Unit Codes and the Unit of Competency titles and corresponding Elements
- the Competency Standard that includes the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide.

Competency Standards for National Skills Certificate – Level-3 in Industrial Food Preservation in Agro-Food Sector

Level Descriptors of NSQF (BNQF 1-6)

Level & Job Classification	Knowledge Domain	Skills Domain	Responsibility Domain
6-Mid-Level Manager/ Sub Assistant Engineer	Comprehensive actual and theoretical knowledge within a specific work or study area with an awareness of the validity and limits of that knowledge, able to analyse, compare, relate and evaluate.	Specialised and wider range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems. Communicate professional issues and solutions to the team and to external partners/users.	Work under broad guidance and self-motivation to execute strategic and operational plan/s. Lead lower-level management. Diagnose and resolve problems within and among work groups.
5-Supervisor	Broad knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to scrutinize and break information into parts by identifying motives or causes.	Broad range of cognitive and practical skills required to generate solutions to specific problems in one or more work or study areas. Communicate practice-related problems and possible solutions to external partners.	Work under guidance of management and self-direction to resolve specific issues. Lead and take responsibility for the work and actions of group/team members. Bridge between management.
4-Highly Skilled Worker	Broader knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to solve problems to new situations by comparing and applying acquired knowledge.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials and information. Communicate using technical terminology and IT technology with partners and users as per workplace requirements.	Work under minimal supervision in specific contexts in response to workplace requirements. Resolve technical issues in response to workplace requirements and lead/guide a team/ group.
3-Skilled Worker	Moderately broad knowledge in a specific work or study area, able to perceive ideas and abstract from drawing and design according to workplace requirements.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools. Communicate with his team and limited external partners upholding the values, nature and culture of the workplace	Work or study under supervision with considerable autonomy. Participate in teams and responsible for group coordination.
2-Semi Skilled Worker	Basic understanding of underpinning knowledge in a specific work or study area, able to interpret and apply common occupational terms and instructions.	Skills required to carry out simple tasks, communicate with his team in the workplace presenting and discussing results of his work with required clarity.	Work or study under supervision in a structured context with limited scope of manipulation
1 –Basic Skilled Worker	Elementary understanding of ability to interpret the underpinning knowledge in a specific study area, able to interpret common occupational terms and instructions.	Specific Basic skills required to carry out simple tasks. Interpret occupational terms and present the results of own work within guided work environment/ under supervision.	Work under direct supervision in a structured context with limited range of responsibilities.

List of Abbreviations

General	
NSDA	National Skills Development Authority
BMET	Bureau of Manpower Employment and Training
ILO	International Labor Organization
ISC	Industry Skills Council
NPVC	National Pre-Vocation Certificate
NSQF	National Skills Qualifications Framework
PPP	Public Private Partnership
SCVC	Standards and Curriculum Validation Committee
STP	Skills Training Provider
UoC	Unit of Competency
Occupation Specific	
KSA	knowledge, skills and Attitudes
OSH	Occupational Safety and Health
PPE	Personal protective equipment
SWOT	Strength, Weakness, Opportunity and Threat
HACCP	Hazard Analysis and Critical Control Points
SOP	Standard Operating Procedures
BFSA	Bangladesh Food Safety Authority
GMP	Good manufacturing process
MSDS	Material Safety Data Sheet
BSTI	Bangladesh Standards and Testing Institution

Approval of Competency Standard

Approved by
9th Executive Committee (EC) Meeting of NSDA
Held on _____ 2022

Deputy Director (Admin)
and
Officer of Secretarial Duties for EC Meeting
National Skills Development Authority

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**Competency Standards for National Skill Certificate – 3 in
Industrial Food Preservation in Agro-Food Sector
Course Structure**

SL	Unit Code and Title		UoC Level	Nominal Duration (Hours)
Generic Units of Competencies				15
1.	GU-02-L2-V1	Practice Occupational Safety and Health in the Work Place	3	15
Sector Specific Units of Competencies				35
2.	SU-HT-04-L3-V1	Follow Food Safety, Hygiene and HACCP Requirements	3	20
	SU-AgFd-05-L3-V1	Apply Quality Systems and Procedure	3	15
Occupation Specific Units of Competencies				200
3.	OU-AgFd-IFP-01-L3-V1	Preserve Pre-production Items	3	60
4.	OU- AgFd -IFP-02-L3-V1	Perform Preservation during Production Process	3	80
5.	OU- AgFd -IFP-03-L3-V1	Perform Preservation of Post-Production items	3	60
Total Nominal Learning Hours				250

Units & Elements at Glance

Generic Units of Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
GU-02-L2-V1	Practice Occupational Safety and Health in the Work Place	1. Identify OSH policies and procedures. 2. Follow OSH procedure 3. Report hazards and risks. 4. Respond to emergencies 5. Maintain personal well-being	15

Sector Specific Units of Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
SU-AgFd-04-L3-V1	Follow Food Safety, Hygiene and <i>HACCP</i> Requirements	1. Practice personal hygiene and good grooming standards 2. Follow safe food handling and sanitation practices 3. Participate in a Hazard Analysis and Critical Control Points (HACCP) team 4. Monitor quality of work outcome 5. Identify and act on quality deficits and / or food safety hazards	20
SU-AgFd-05-L3-V1	Apply Quality Systems and Procedure	1. Work within quality system 2. Apply and monitor quality system improvement in the workplace 3. Hold responsible for work quality 4. Apply standard procedures for each job.	15

Occupation Specific Units of Competencies

Code	Unit of Competency	Elements of Competency	Duration (Hours)
OU-AgFd-IFP-01-L3-V1	Preserve Pre-production Items	1. Prepare for preservation 2. Receive and store raw-materials 3. Transfer raw-materials to production shop floor 4. Clean and store tools and equipment	60
OU- AgFd -IFP-02-L3-V1	Perform Preservation during Production Process	1. Prepare for preservation 2. Preserve intermediate product 3. Clean and store tools and equipment	80
OU- AgFd -IFP-03-L3-V1	Perform Preservation of Post-Production items	1. Prepare for preservation 2. Preserve finished products 3. Clean and store tools and equipment	60

Generic Units of Competencies

Unit Code and Title	GU-02-L2-V1: Apply Occupational Safety and Health (OSH) Procedure in the Workplace
Unit Descriptor	This unit covers the knowledge, skills and attitudes (KSA) required in applying occupational safety and health (OSH) procedures in the workplace. It specifically includes identifying OHS policies and procedures, following OSH procedure, reporting to emergencies, and maintaining personal well-being.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify OSH policies and procedures.	1.1. <u>OHS policies</u> and <u>safe operating procedures</u> are accessed and stated. 1.2. <u>Safety signs and symbols</u> are identified and followed. 1.3. Emergency response, evacuation procedures and other contingency measures are determined according to workplace requirements.
2. Follow OSH procedure	2.1 <u>Personal protective equipment (PPE)</u> is selected and collected as required. 2.2 Personal protective equipment (PPE) is correctly used in accordance with organization OHS procedures and practices. 2.3 A clear and tidy workplace is maintained as per workplace standard. 2.4 PPE is maintained to keep them operational and compliant with OHS regulations.
3. Report hazards and risks.	3.1 <u>Hazards</u> and risks are identified, assessed and controlled. 3.2 Incidents arising from hazards and risks are reported to designated authority.
4. Respond to emergencies	4.1 Alarms and warning devices are responded. 4.2 Workplace <u>emergency procedures</u> are followed. 4.3 <u>Contingency measures</u> during workplace accidents, fire and other emergencies are recognized and followed in accordance with organization procedures. 4.4 First aid procedures is applied during emergency situations.
5. Maintain personal well-being	5.1 OHS policies and procedures are adhered to. 5.2 OHS awareness programs are participated in as per workplace guidelines and procedures. 5.3 Corrective actions are implemented to correct unsafe condition in the workplace. 5.4 <u>"Fit to work" records</u> are updated and maintained according to workplace requirements.
Range of Variables	
Variables	Range (may include but not limited to):
1. OHS Policies	1.1. Bangladesh standards for OHS 1.2. Fire Safety Rules and Regulations 1.3. Code of Practice 1.4. Industry Guidelines

2. Safe Operating Procedures	2.1 Orientation on emergency exits, fire extinguishers, fire escape, etc. 2.2 Emergency procedures 2.3 First Aid procedures 2.4 Tagging procedures 2.5 Use of PPE 2.6 Safety procedures for hazardous substances
3. Safety Signs and symbols	3.1 Direction signs (exit, emergency exit, etc.) 3.2 First aid signs 3.3 Danger Tags 3.4 Hazard signs 3.5 Safety tags 3.6 Warning signs
4. Personal Protective Equipment (PPE)	4.1 Gas Mask 4.2 Gloves 4.3 Safety boots 4.4 Face mask 4.5 Overalls 4.6 Goggles and safety glasses 4.7 Sun block 4.8 Chemical/Gas detectors
5. Hazards	5.1 Chemical hazards 5.2 Biological hazards 5.3 Physical Hazards 5.4 Mechanical and Electrical Hazard 5.5 Mental hazard 5.6 Ergonomic hazard
6. Emergency Procedures	6.1 Fire fighting 6.2 Earthquake 6.3 Medical and first aid 6.4 evacuation`
7. Contingency measures	7.1 Evacuation 7.2 Isolation 7.3 Decontamination
8. "Fit to Work" records	8.1 Medical Certificate every year 8.2 Accident reports, if any 8.3 Eye vision certificate
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 stated OHS policies and safe operating procedures 1.2 followed safety signs and symbols 1.3 used personal protective equipment (PPE) 1.4 maintained workplace clear and tidy 1.5 assessed and Controlled hazards 1.6 followed emergency procedures 1.7 followed contingency measures 1.8 implemented corrective actions

2. Underpinning knowledge	2.1 Define OHS 2.2 OHS Workplace Policies and Procedures 2.3 Work Safety Procedures 2.4 Emergency Procedures 2.5 Hazard control procedure 2.6 Different types of Hazards 2.7 PPE and there uses 2.8 Personal Hygiene Practices 2.9 OHS Awareness
3. Underpinning skills	3.1 Accessing OHS policies 3.2 Handling of PPE 3.3 Handling cleaning tools and equipment 3.4 Writing report 3.5 Responding to emergency procedures
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 Workplace 5.2 Equipment and outfits appropriate in applying safety measures 5.3 Tools, materials and documentation required 5.4 OHS Policies and Procedures
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning 6.4 Portfolio
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NTVQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Sector Specific Units of Competencies

Unit Code and Title	SUTH04L3V1: Follow Food Safety, Hygiene and HACCP Requirements
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to follow food safety, hygiene and HACCP management. It specifically includes the tasks of practicing personal hygiene and good grooming standards, following safe food handling and sanitation practices, participating in a Hazard Analysis and Critical Control Points (HACCP) team, monitoring quality of work outcome, identifying and act on quality deficits and / or food safety hazards
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria Bold and underlined terms are elaborated in the Range of Variables
1. Practice personal hygiene and good grooming standards	1.1 Personal hygiene and good grooming are practiced in line with workplace health and safety requirements. 1.2 Health conditions and/or illness are reported as required by the food safety program. 1.3 <u>Clothing and footwear</u> are appropriate for the food handling task and meets the requirements of the food safety program. 1.4 Movement around the workplace complies with the food safety program.
2. Follow safe food handling and sanitation practices	2.1 <u>Food handling</u> requirements are identified. 2.2 Safe food handling practices are followed in line with workplace sanitation regulations and the food safety code. 2.3 The workplace is maintained in a clean and tidy order to meet workplace standards.
3. Participate in a Hazard Analysis and Critical Control Points (HACCP) team	3.1 A HACCP team is formed following industry standard 3.2 Potential sources of microbiological, chemical and physical hazards are identified 3.3 Critical Control Points and critical limits for taking corrective action are set to prevent potential hazards 3.4 Monitoring system is established according to standard operating procedures (SOP) 3.5 Corrective action procedure and verification system are established according to standard procedures 3.6 Paper work related to the HACCP system and all critical control points are recorded as per standard procedure.
4. Monitor quality of work outcome	4.1 Quality requirements are identified. 4.2 Inputs are inspected to confirm capability to meet quality requirements. 4.3 Work is conducted and monitored to produce required outcomes.

5. Identify and act on quality deficits and / or food safety hazards	5.1 Work area, materials, equipment and product are routinely checked to ensure compliance with quality and / or food safety requirements. 5.2 <u>Processes, practices or conditions</u> that are not consistent with quality standards or food safety program are identified. 5.3 Quality variations and / or <u>food safety</u> hazards are rectified or removed within the level of responsibility and in accordance with workplace procedures. 5.4 Quality variations and / or food safety outside the scope of individual responsibility are reported to appropriate personnel according to workplace reporting requirements.
Range of Variables	
Variable	Range (may include but not limited to):
1. Personal Protective Equipment (PPE)	1.1 Apron 1.2 Protective clothing 1.3 Gloves 1.4 Hair net 1.5 Other PPE as per OSH requirements
2. Clothing and footwear	2.1 Purpose designed overalls or uniforms 2.2 Hair-nets 2.3 Beard snoods 2.4 Gloves 2.5 Overshoes
3. Food handled and stored	3.1 Raw materials 3.2 Consumables 3.3 Part-processed product 3.4 Finished product 3.5 Cleaning materials
4. Processes, practices or conditions	4.1 Methods of receiving and storing food 4.2 Food preparation 4.3 Cooking 4.4 Holding 4.5 Cooling 4.6 Chilling and reheating 4.7 Packaging 4.8 Disposal
5. Food safety	5.1 Failure to check delivery temperatures of potentially hazardous chilled food 5.2 Failure to place temperature-sensitive food in temperature-controlled storage conditions promptly 5.3 Failure to wash hands when required 5.4 Use of cloths for unsuitable purposes
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet all requirements of current version of the Units of Competency.	

1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 maintained housekeeping standards in workplace following OSH requirements. 1.2 maintained personal hygiene and worn PPE as per OSH requirements. 1.3 cleaned equipment and workplace for production and hygiene requirements. 1.4 rectified or removed quality variations and/or food safety hazards with the level of responsibility and in accordance with workplace procedures.
2. Underpinning knowledge	2.1 Practice personal hygiene. 2.2 Rules and regulations to produce quality and safety in food. 2.3 Control measures for food safety. 2.4 Food safety hazards. 2.5 Cleaning, sanitation and waste storage and disposal practices. 2.6 Food safety procedures. 2.7 HACCP team 2.8 Monitor quality of work outcome. 2.9 Job roles, responsibilities and compliance.
3. Underpinning skills	3.1 Practicing personal hygiene and good grooming in line with workplace health and safety requirements. 3.2 Identifying food rules and regulations, food grade preservatives and food additives to meet food production safety requirements according to BSTI. 3.3 Controlling the measures for minimizing food contamination for food safety (for example keeping out micro-organisms, maintenance of anaerobic conditions, use of low temperatures, drying, use of chemical preservatives etc.). 3.4 Performing waste collection, recycling, handling and disposal. 3.5 Performing food safety procedures such as: checking delivery temperatures of potentially hazardous chilled food, placing temperature-sensitive food in temperature-controlled storage conditions promptly, washing hands when required, use of cloths for unsuitable purposes. 3.6 Performing food safety and quality responsibilities and requirements relating to the work area. 3.7 Responding quickly and to take safety precautions for different hazardous situations.
4. Required attitudes	4.1 Commitment to occupational health and safety. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concern. 4.7 Respect to peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.

5. Resource implications	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 tools, equipment and facilities appropriate to processes or activities 5.3 materials relevant to the proposed activity.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written Test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited centre. 7.2 Assessment should be done by NSDA certified/ nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code and Title	SU-AgFd-05-L3-V1: Apply Quality Systems and Procedure
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to apply quality systems and procedure. It specifically includes the tasks of working within quality system, applying and monitor quality system improvement in the workplace, holding responsible for work quality, and applying standard procedures for each job.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria Bold and underlined terms are elaborated in the Range of Variables
1. Work within quality system	1.1 Instructions and procedures are followed strictly and duties are performed in accordance with demand of <u>quality improvement system</u> . 1.2 Conformance to specifications is ensured. 1.3 Defects are detected and reported to authority according to standard operating procedures. 1.4 Customer's satisfaction is ensured in performing an operation or quality of product or services.
2. Apply and monitor quality system improvement in the workplace	2.1 Performance measurement systems are identified 2.2 Performance is assessed at regular interval. 2.3 Specifications and standard operating procedures are established and identified. 2.4 Defects are detected and reported according to standard operating procedures. 2.5 Process improvement procedures are applied 2.6 Quality of product is checked and verified.
3. Hold responsible for work quality	3.1 Concept of supplying product or service to meet the <u>customer quality requirements</u> is understood and accordingly applied. 3.2 Responsibility is taken for quality work.
4. Apply standard procedures for each job.	4.1 <u>Quality control and quality assurance</u> system procedures for each job are followed. 4.2 Conformance to specification is ensured in every case at all situations.
Range of Variables	
Variable	Range (may include but not limited to):
1. Quality improvement system	A system comprising some or all of the following elements: 1.1 Quality inspection 1.2 Quality control. 1.3 Quality improvement. 1.4 Quality assurance
2. Customer quality requirements.	2.1 Appropriateness of product 2.2 Appearance 2.3 Durability. 2.4 Grade or quality design 2.5 Usability life span 2.6 Conformance to Quality 2.7 Reliability 2.8 Maintainability

3. Quality control and quality assurance	3.1 Quality control 3.1.1 Product 3.1.2 Reactive 3.1.3 Line function 3.1.4 Find the defects 3.1.5 Walk through 3.1.6 Testing 3.1.7 Inspection 3.1.8 Checkpoint Review	3.2 Quality Assurance 3.2.1 Process 3.2.2 Pro-active 3.2.3 Staff function 3.2.4 Prevent the defects 3.2.5 Quality audit 3.2.6 Defining process 3.2.7 Selection of tools 3.2.8 Training
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet all requirements of current version of the Units of Competency.		
1. Critical aspects of competency	1.1 Followed instructions and procedures strictly 1.2 Performed duties in accordance with demand of quality system 1.3 Ensured conformance to specifications 1.4 Detected defects and reported to authority in accordance to standard operating procedures. 1.5 Understood concept of supplying product or service to meet the customer quality requirements 1.6 Held responsible for quality work 1.7 Followed quality control and quality assurance system procedures for each job	
2. Underpinning Knowledge	2.1 The reasons why good quality should be maintained and poor quality should be eliminated 2.2 Meaning of the key terms - quality, quality assurance, quality control, quality inspection, quality improvement and total quality control. 2.3 Process and procedures for improving and maintaining quality 2.4 Procedures for addressing defects. 2.5 Record keeping within the quality improvement system in workplace 2.6 Factors, which affect successful implementation of the quality systems and procedures.	
3. Underpinning Skills	1.1 Maintaining good quality 1.2 Eliminating poor quality 1.3 Understanding the meaning of the key terms - quality, quality assurance, quality control, quality inspection, quality improvement and total quality control. 1.4 Improving and maintaining quality 1.5 Addressing defects and procedures 1.6 Recording within the quality improvement system in workplace. 1.7 Implementing quality systems and procedures	
4. Required attitudes	4.1 Commitment to occupational health and safety. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concern. 4.7 Respect to peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.	

5. Resource implications	The following resources must be provided: 6.1 workplace (actual or simulated) 6.2 tools, equipment and facilities appropriate to processes or activities 6.3 materials relevant to the proposed activity.
7. Methods of assessment	Methods of assessment may include but not limited to: 8.1 written Test 8.2 Demonstration 8.3 Oral Questioning
9. Context of assessment	10.1 Competency assessment must be done in NSDA accredited center. 10.2 Assessment should be done by NSDA certified/ nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Occupation Specific Units of Competencies

Unit Code and Title	OU-AGFD-IFP-01-L3-V1: Preserve Pre-production Items
Unit Descriptor	This unit covers the knowledge, skills and attitude required to preserve pre-production items. It specifically includes the requirements of preparing for preservation, receiving and store raw-materials, transferring raw-materials to production shop floor, and cleaning and storing tools and equipment.
Nominal Hours	60 hours
Elements of Competency	Performance Criteria <u>Bold and underlined</u> terms are elaborated in the range of variables
1. Prepare for preservation	1.1 <u>Personal hygiene</u> is maintained 1.2 Required <u>Personal Protective Equipment (PPE)</u> are Collected and used 1.3 Required <u>Tools and equipment</u> are collected, cleaned and sanitized
2. Receive and store raw-materials	2.1 <u>Raw and packaging materials</u> supply vehicle inspections is performed as per checklist 2.2 Label information is checked as per BFSa and BSTI guideline 2.3 Sample is collected for testing as per SOP 2.4 Unloaded materials are stored at <u>designated place</u> as per SOP, GMP and Food safety rules with tagging 2.5 <u>Safe storage area</u> is maintained as per Material Safety Data Sheet (MSDS)
3. Transfer raw-materials to production shop floor	3.1 Materials are transferred as per product requirement 3.2 Materials are checked with visual inspection 3.3 Materials are placed at designated place on the floor as per 5s rules
4. Clean and store tools and equipment	4.1 Tools and equipment are cleaned and stored as per standard procedure 4.2 Housekeeping activities are performed as per SOP 4.3 Waste materials are disposed as per standard
Range of Variables	
Variable	Range (May include but not limited to:)
1. Personal hygiene	1.1 Hand wash / sanitization 1.2 Nail cut 1.3 Deworming 1.4 Hair trimming 1.5 Bear 1.6 Bath 1.7 Avoid ornaments 1.8 Communicable disease 1.9 Injury son hands

2. Personal Protective Equipment (PPE)	2.1 Mask 2.2 Hair net 2.3 Apron 2.4 Gloves 2.5 Long sleeve gloves 2.6 Safety Goggles
3. Tools and equipment	3.1. Sample collection tools 3.2. Trolley 3.3. Forklift
4. Raw and packaging materials	4.1 Flour 4.2 Sugar 4.3 Oil and Fats 4.4 Meat 4.5 Fish 4.6 Vegetable 4.7 Eggs 4.8 Food additives 4.9 Milk 4.10 Packaging materials 4.10.1 Paper based 4.10.2 Plastic based 4.10.3 Foil
5. Designated Place	5.1 Ambient temperature storage area 5.2 Cool Room 5.3 Freezing Storage
6. Safe Storage Area	6.1 Pest control 6.2 Temperature control 6.3 Humidity control 6.4 Ventilation 6.5 Lighting
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the unit of competency.	
1. Critical aspects of competency	1.1 Prepared for preservation 1.2 Received and stored raw-materials 1.3 Transferred raw-materials to production shop floor
2. Underpinning knowledge	2.1 Personal Hygiene 2.2 Personal protective equipment (PPE) 2.3 Raw materials 2.4 Packaging materials 2.5 Label information of materials 2.6 Standard operating procedure (SOP) 2.7 Good manufacturing process (GMP) 2.8 Food safety rules 2.9 Material Safety Data Sheet (MSDS)

3. Underpinning skill	3.1 Maintaining storage area 3.2 Complying loading and unloading procedure 3.3 Checking label information 3.4 Collecting samples 3.5 Labeling materials 3.6 Transferring raw-materials to production shop floor
4. Required attitude	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn the document preparation process. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for the rights of peers, subordinates and seniors at the workplace. 4.8 Communication with peers, subordinates and seniors in the workplace. 4.9 Keeps a clean and orderly workplace and equipment.
5. Resource implication	5.1 Relevant tools, Equipment, software and facilities needed to perform the activities. 5.2 Required learning materials.
6. Methods of assessment	6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited center. 7.2 Assessment should be done by NSDA certified/nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code Title	OU-AGFD-IFP-02-L3-V1: Perform Preservation during Production Process
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform preservation during production process. This specifically includes the requirements of preparing for preservation, preserving intermediate product, cleaning and storing, tools and equipment.
Nominal Hours	80 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables)
1. Prepare for preservation	1.1 Personal hygiene is maintained 1.2 Required Personal Protective Equipment (PPE) are Collected and used 1.3 Required Tools, equipment and utensils are collected, cleaned and sanitized
2. Preserve intermediate product	2.1 Raw-materials are measured as per recipe 2.2 <u>Intermediate products</u> are prepared as per SOP 2.3 Intermediate products are preserved as per product requirement 2.4 intermediate products are used for final product as per SOP 2.5 Frozen products are kept at blast freezer as per SOP
3. Clean and store tools and equipment	3.1 Tools and equipment are cleaned and stored as per standard procedure 3.2 Housekeeping activities are performed as per SOP 3.3 Waste materials are disposed as per standard
Range of Variables	
Variable	Range (may include but not limited to):
1. Personal hygiene	1.1 Hand wash / sanitization 1.2 Nail cut 1.3 De-worming 1.4 Hair trimming 1.5 Beard 1.6 Bath 1.7 Avoid ornaments 1.8 Communicable disease 1.9 Injury son hands

2 Personal Protective Equipment (PPE)	2.1 Mask 2.2 Hair net 2.3 Apron 2.4 Gloves 2.5 Long sleeve gloves 2.6 Safety Goggles
3 Intermediate products	3.1 Frozen products 3.2 Baked food products 3.3 Confectionery food products 3.4 Dairy products 3.5 Fried and Extruded snacks 3.6 Water 3.7 Beverage
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 preserved intermediate products as per product requirement 1.2 kept frozen products at blast freezer as per SOP
2. Underpinning knowledge	2.1 Recipe 2.2 Intermediate products 2.3 Final Products 2.4 Frozen products 2.5 Blast freezer
3. Underpinning skills	3.1 Measuring raw-materials 3.2 Preparing intermediate products 3.3 Preserving intermediate product following SOP
4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn the document preparation process. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for the rights of peers, subordinates and seniors at the workplace. 4.8 Communication with peers, subordinates and seniors in the workplace. 4.9 Keeps a clean and orderly workplace and equipment.

5. Resource implication	The following resources must be provided: 5.1 Workplace (actual or simulated). 5.2 Tools, equipment and physical facilities appropriate to perform activities. 5.3 Materials consumable to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited center. 7.2 Assessment should be done by NSDA certified/nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code Title	OU-AGFD-IFP-03-L3-V1: Perform Preservation of Post-Production items
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform preservation of post-production items. This specifically includes the requirements of preparing for preservation, preserving finished products, and cleaning and storing tools and equipment.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables)
1. Prepare for preservation	1.1 <u>Personal hygiene</u> is maintained 1.2 Required <u>Personal Protective Equipment (PPE)</u> are Collected and used 1.3 Required Tools, equipment and utensils are collected, cleaned and sanitized
2. Preserve finished products	2.1 <u>Frozen products</u> are preserved as per SOP 2.2 <u>Baked food products</u> are preserved as per SOP 2.3 <u>Confectionery food products</u> are preserved as per SOP 2.4 <u>Dairy products</u> are preserved as per SOP 2.5 <u>Fried and Extruded snacks</u> are preserved as per SOP 2.6 <u>Water</u> is preserved as per SOP 2.7 <u>Beverage</u> is preserved as per SOP
3. Clean and store tools and equipment	3.1 Tools and equipment are cleaned and stored as per standard procedure 3.2 Housekeeping activities are performed as per SOP 3.3 Waste materials are disposed as per standard
Range of Variables	
Variable	Range (may include but not limited to):
1. Personal hygiene	1.1 Hand wash / sanitization 1.2 Nail cut 1.3 De-worming 1.4 Hair trimming 1.5 Beard 1.6 Bath 1.7 Avoid ornaments 1.8 Communicable disease

	1.9 Injury son hands
2 Personal Protective Equipment (PPE)	2.1 Mask 2.2 Hair net 2.3 Apron 2.4 Gloves 2.5 Long sleeve gloves 2.6 Safety Goggles
3 Frozen products	3.1 Flour-based 3.2 Meat-based 3.3 Vegetable-based 3.4 Fish-based 3.5 Ice-cream
4 Baked food products	4.1 Cake 4.2 Biscuit 4.3 Wafer 4.4 Bread
5 Confectionery food products	5.1 Candy 5.2 Toffee 5.3 Chocolate 5.4 Dehydrated fruits 5.5 Pickle 5.6 Jam 5.7 Jelly 5.8 Sauce
6 Dairy products	6.1 Milk (UHT/ Posturized) 6.2 Yogurt/ Curd 6.3 Yogurt drinks 6.4 Condensed Milk 6.5 Powder Milk 6.6 Cheese 6.7 Butter 6.8 Ghee
7 Fried and Extruded snacks	7.1 Chanachur 7.2 Muri 7.3 Daal Bhaja 7.4 Badam Bhaja 7.5 Noodles 7.6 Chal Bhaja 7.7 Chips 7.8 PoP Corn 7.9 Crackers
8 Water	8.1 Drinking water 8.2 Mineral water

9 Beverage	9.1 Carbonated drinks 9.2 Fruit drinks
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Preserved finished products
2. Underpinning knowledge	2.1 Personal hygiene 2.2 Personal Protective Equipment (PPE) 2.3 Industrial finished food products
3. Underpinning skills	3.1 Observing occupational safety and health 3.2 Preserve finished products following SOP
4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn the document preparation process. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for the rights of peers, subordinates and seniors at the workplace. 4.8 Communication with peers, subordinates and seniors in the workplace. 4.9 Keeps a clean and orderly workplace and equipment.
5. Resource implication	The following resources must be provided: 5.1 Workplace (actual or simulated). 5.2 Tools, equipment and physical facilities appropriate to perform activities. 5.3 Materials consumable to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited center. 7.2 Assessment should be done by NSDA certified/ nominated assessor

Accreditation Requirements

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Development of Competency Standard

The Competency Standards for National Skills Certificate in Industrial Food Preservation, Level-2 is developed by NSDA on 16-20 October 2022.

S/N	Name and Address	Position in the committee	Signature and Date
1.	Alif Rudaba, Member (Planning & Skills Standard) Joint Secretary, National Skills Development Authority (NSDA)	Chairman	
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Validation of Competency Standard

The Competency Standards for National Skills Certificate in Industrial Food Preservation, Level-2 is validated by NSDA on 27 October 2022.

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