

**National Technical and Vocational Qualification Framework**

**NTVQF**

**Competency Standards**

For

**Packaging Technician  
NTVQ, Level 2-3**



**Bangladesh Technical Education Board**

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## INTRODUCTION

These Competency Standards were developed by the Standards and Curriculum Development Committee (SCDC) **for the occupation ‘Food Packaging Technician’** that was established under the sub-sector Industry Skills Council (ISC) and with the assistance of the Technical and Vocational Education Reform project. This project is funded by the European Union, the International Labour Organization and the Government of Bangladesh.

The competency standards are the foundation on which new competency based curriculum will be developed that responds better to the needs of industry for skilled workers. The members of the SCDCs are primarily from industry but with representatives from the Bangladesh Technical Education Board (BTEB) and the Directorate of Technical Education (DTE), Bureau of Manpower Employment and Training (BMET), NGO, and Private Training providers. Persons who will successfully complete the new TVET programs based on these competency standards will receive a qualification in the new National Technical and Vocational Qualification Framework (NTVQF).

Endorsed by

Industry Skills Council  
Date:

Bangladesh Technical Education Board (BTEB)  
Date:

## Bangladesh NTVQF with Job Classifications

NTVQF LEVELS	EDUCATION SECTORS			Job Classification
	Pre-Vocation Education	Vocational Education	Technical Education	
NTVQF 6			Diploma in engineering or equivalent	Supervisor / Middle Level Manager /Sub Assistant Engr. etc.
NTVQF 5		National Skill Certificate 5 (NSC 5)		Highly Skilled Worker / Supervisor
NTVQF 4		National Skill Certificate 4 (NSC 4)		Skilled Worker
NTVQF 3		National Skill Certificate 3 (NSC3)		Semi-Skilled Worker
NTVQF 2		National Skill Certificate 2 (NSC 2)		Medium-Skilled Worker
NTVQF 1		National Skill Certificate 1 (NSC 1)		Basic Skilled Worker
Pre-Voc 2	National Pre-Vocation Certificate NPVC 2			Pre-Vocation Trainee
Pre-Voc 1	National Pre-Vocation Certificate 1 NPVC 1			Pre-Vocation Trainee

### Annex 1: NTVQF level Descriptors

NTVQF Level	Knowledge	Skill	Responsibility	Job Class.
6	<ul style="list-style-type: none"> <li>Comprehensive actual and theoretical knowledge within a specific study area with an awareness of the limits of that knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>Specialised and restricted range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems</li> </ul>	<ul style="list-style-type: none"> <li>Manage a team or teams in workplace activities where there is unpredictable change</li> <li>Identify and design learning programs to develop performance of team members</li> </ul>	Supervisor / Middle Level Manager /Sub Assistant Engr. etc.
5	<ul style="list-style-type: none"> <li>Very broad knowledge of the underlying, concepts, principles, and processes in a specific study area</li> </ul>	<ul style="list-style-type: none"> <li>Very broad range of cognitive and practical skills required to generate solutions to specific problems in one or more study areas.</li> </ul>	<ul style="list-style-type: none"> <li>Take overall responsibility for completion of tasks in work or study</li> <li>Apply past experiences in solving similar problems</li> </ul>	Highly Skilled Worker / Supervisor
4	<ul style="list-style-type: none"> <li>Broad knowledge of the underlying, concepts, principles, and processes in a specific study area</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Take responsibility, within reason, for completion of tasks in work or study</li> <li>Apply past experiences in solving similar problems</li> </ul>	Skilled Worker
3	<ul style="list-style-type: none"> <li>Moderately broad knowledge in a specific study area.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under supervision with some autonomy</li> </ul>	Semi-Skilled Worker
2	<ul style="list-style-type: none"> <li>Basic underpinning knowledge in a</li> </ul>	<ul style="list-style-type: none"> <li>Basic skills required to carry out simple</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under indirect supervision in a structured</li> </ul>	Medium Skilled Worker

	specific study area.	tasks	context	
1	<ul style="list-style-type: none"> <li>Elementary understanding of the underpinning knowledge in a specific study area.</li> </ul>	<ul style="list-style-type: none"> <li>Limited range of skills required to carry out simple tasks</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under direct supervision in a structured context</li> </ul>	Basic Skilled Worker
Pre-Voc 2	<ul style="list-style-type: none"> <li>Limited general knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Very limited range of skills and use of tools required to carry out simple tasks</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under direct supervision in a well-defined, structured context.</li> </ul>	Pre-Vocation Trainee
Pre-Voc 1	<ul style="list-style-type: none"> <li>Extremely limited general knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Minimal range of skills required to carry out simple tasks</li> </ul>	<ul style="list-style-type: none"> <li>Simple work or study exercises, under direct supervision in a clear, well defined structured context</li> </ul>	Pre-Vocation Trainee

**NATIONAL COMPETENCY STANDARDS for National Certificate  
in Food Packaging (Level 2 & 3)**

<b>Sl. No.</b>	<b>Unit Code and Title</b>		<b>UoC Level</b>	<b>Nominal Duration (Hours)</b>
<b>Generic – Compulsory (5 UoCs required)</b>				<b>200</b>
1.	GN1001A1	Use basic mathematical concepts	1	40
2.	GN1002A1	Apply OSH practices in the workplace	1	30
3.	GN2003A1	Use English in the workplace	2	70
4.	GN2004A1	Operate in a self- directed team	2	30
5.	GN2005A1	Present and apply workplace information	2	30
<b>Sector SPECIFIC – Compulsory (3 UoCs required)</b>				<b>130</b>
6.	FODSS1006A1	Follow quality and food safety programs	1	60
7.	FODSS1007A1	Follow OSH policies and procedures in the food industry	1	40
8.	FODSS1008A1	Working in the food industry	1	30
<b>Occupation Specific – Compulsory (11 UoCs required)</b>				<b>590</b>
9.	FODPAC3009A1	Operate a twist-wrap process	3	30
10.	FODPAC3010A1	Operate a sieving, blending and bagging process	1	80
11.	FODPAC2011A1	Operate a case packing process	2	60
12.	FODPAC3012A1	Operate injection blow moulding equipment	3	40
13.	FODPAC3013A1	Operate a high speed wrapping process	3	40
14.	FODPAC2014A1	Operate a form, fill and seal process	2	90
15.	FODPAC3015A1	Operate a blow moulding equipment	3	40
16.	FODPAC3016A1	Fill and close product into bottles	3	40
17.	FODPAC3017A1	Fill and close product in cans	3	40
18.	FODPAC2018A1	Operate a blister packaging process	2	70
19.	FODPAC3019A1	Participate in a Hazard Analysis and Critical Control points (HACCP) team	4	60
<b>Total Nominal Learning Hours</b>				<b>920</b>

## Course Structure

for

### National Certificate in Food Packaging (NTVQF Level 2)

S. No.	Unit Code and Title	UoC Level	Nominal Duration (Hours)
<b>Generic (5 UoCs required)</b>			<b>200</b>
1.	GN1001A1 Use basic mathematical concepts	1	40
2.	GN1002A1 Apply OSH practices in the workplace	1	30
3.	GN2003A1 Use English in the workplace	2	70
4.	GN2004A1 Operate in a self- directed team	2	30
5.	GN2005A1 Present and apply workplace information	2	30
<b>Sector Specific (3 UoCs required)</b>			<b>130</b>
6.	FODSS1006A1 Follow quality and food safety programs	1	60
7.	FODSS1007A1 Follow OSH policies and procedures in the food industry	1	40
8.	FODSS1008A1 Work in the food industry	1	30
<b>Occupation Specific – Compulsory (4 UoCs required)</b>			<b>300</b>
9.	FODPAC3010A1 Operate a sieving, blending and bagging process	3	80
10.	FODPAC2014A1 Operate a form, fill and seal process	2	90
11.	FODPAC2011A1 Operate a case packing process	2	60
12.	FODPAC2018A1 Operate a thermo-formed blister packaging	2	70
<b>Total Nominal Learning Hours</b>			<b>630</b>



## Course Structure

for

### National Certificate in Food Packaging (NTVQF Level 3)

S. No.	Unit Code and Title	UoC Level	Nominal Duration (Hours)
<b>Occupation Specific – Compulsory (7 UoCs required)</b>			<b>290</b>
1.	FODPAC3009A1	Operate a twist-wrap process	30
2.	FODPAC3012A1	Operate injection blow moulding equipment	40
3.	FODPAC3013A1	Operate a high speed wrapping process	40
4.	FODPAC3015A1	Operate a blow moulding equipment	40
5.	FODPAC3016A1	Fill and close product into bottles	40
6.	FODPAC3017A1	Fill and close product in cans	40
7.	FODPAC3019A1	Participate in a Hazard Analysis and Critical Control points (HACCP) team	60
<b>Total Nominal Learning Hours</b>			<b>290</b>

## **List of Abbreviations**

BMET – Bureau of Manpower Employment and Training

BTEB – Bangladesh Technical Education Board

DTE – Directorate of Technical Education

ILO – International Labour Organization

ISC – Industry Skills Council

NPVC – National Pre-Vocation Certificate

NTVQF – National Technical and Vocational Qualification Framework

SSDC – Standards and Curriculum Development Committee

TVET – Technical Vocational Education and Training

UoC – Unit of Competency

### **Occupation Specific Abbreviations**

GAP – Good Agricultural Practices

GMP – Good Manufacturing Practices

HACCP – Hazard Analysis and Critical Control Points

HDPE – High Density Polyethylene

LDPE - Low Density Polyethylene

MSDS – Material Safety Data Sheet

OSH – Occupational Safety and Health

PPE – Personal Protective Equipment

SOP – Standard Operating Procedure

SSOP – Sanitation Standard Operating Procedure

# **GENERIC UNITS**

## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>GN1001A1 - Use Basic Mathematical Concepts</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This requires the knowledge, skill and attitude to apply mathematical methods such as addition, subtraction, multiplication, and division, among others, in the routine tasks of an organization.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify calculation requirements in the workplace	1.1 Calculation requirements are identified from <i>workplace information</i>
2. Select appropriate mathematical methods for the calculation	2.1. Appropriate <i>Mathematical methods</i> are selected to carry out the calculation. 2.2. <i>System and units of measurement</i> to be followed are determined.
3. Use basic mathematical concepts to calculate workplace calculation.	3.1. Calculations are completed using appropriate methods such as addition, subtraction, multiplication and division. 3.2. Systems and units of measurement for the task are applied to workplace calculation.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Equipment and tools	1.1 Calculator 1.2 Computer with office software
2. Mathematical methods	2.1. Addition 2.2. Subtraction 2.3. Division 2.4. Multiplication 2.5. Ratio on any types of real values (such as whole numbers, fractional numbers, percentages, numbers with exponents)
3. System and units of measurement	3.1. Measurement 3.2. Volume 3.3. Weight

	3.4. Mass 3.5. Density 3.6. Percentage 3.7. Length / Breadth / Thickness 3.8. Capacity 3.9. Time 3.10. Temperature 3.11. Budget, Pay/ Wages, Leave entitlements 3.12. Material usage 3.13. Speed 3.14. Costing
4. Workplace information	4.1 Project documents 4.2 Graphs 4.3 Charts 4.4 Tables 4.5 Spread sheets 4.6 Item price quotations 4.7 Equipment manuals
5. Budget	5.1 Budget of consumables 5.2 Calculation for software components 5.3 Hardware equipment 5.4 Maintenance budget of a set-up 5.5 Cost estimation
<b>Evidence Guide</b>  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 Applied mathematical methods such as addition, subtraction, division and multiplication to workplace calculations.
2. Underpinning knowledge	2.1. Calculation requirements in the workplace 2.2. Select appropriate mathematical methods 2.3. Equipment and tools 2.4. Mathematical language, symbols and terminology 2.5. Application of units 2.6. Workplace information 2.7. Using arithmetic processes to find solutions to simple mathematical problems
3. Underpinning skill	3.1. Ability to identify calculation requirements from workplace information 3.2. Ability to select appropriate mathematical methods 3.3. Ability to use appropriate technology

	<p>3.4. Ability to use mathematical language, symbols and terminology</p> <p>3.5. Understanding of appropriate units of measurement (such as kg, meter) and application may include measurement, volume, weight, density, percentage etc.</p> <p>3.6. Ability to include workplace information (project documents, graphs, charts, tables, spread sheets, item price quotations, equipment manuals)</p> <p>3.7. Ability to use arithmetic processes to find solutions to simple mathematical problems</p> <p>3.8. Ability to apply in the workplace.</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Tools, equipment and physical facilities appropriate to perform activities.</p> <p>5.2 Materials, consumables to perform activities.</p>
6 Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7 Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>GN1002A1: Apply OSH practices in the workplace</b>
<b>Nominal Hours</b>	<b>30 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to identify and apply OSH in the workplace. This also covers identifying, controlling and reporting OSH hazards, conducting of work in a safe manner, following emergency response procedure and maintaining and improving health and safety in the workplace.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify, control and report OSH hazards	<p>1.1 Immediate work area is routinely checked for OSH hazards prior to commencing and during work.</p> <p>1.2 <i>Hazards</i> and unacceptable performance are identified and corrective action is taken within the level of responsibility.</p> <p>1.3 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.4 Safety Signs and symbols are identified and followed</p>
2. Conduct work safely	<p>2.1. Apply OSH practices in the workplace.</p> <p>2.2. Appropriate <i>personal protective equipment (PPE)</i> is selected and worn.</p>
3. Follow emergency response procedures	<p>3.1. Emergency situations are identified and reported according to workplace reporting requirements.</p> <p>3.2. Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures.</p> <p>3.3. <i>Workplace procedures</i> for dealing with accidents, fires and emergencies are followed whenever necessary within scope of responsibilities.</p>
4. Maintain and improve health and safety in the work place	<p>4.1 Risks are identified and appropriate control measures are implemented in the work area.</p> <p>4.2 Recommendations arising from risk assessments are implemented within level of responsibility.</p> <p>4.3 Opportunities for improving OSH performance are identified and raised with relevant personnel.</p> <p>4.4 Safety records according to <i>company policies</i> are maintained.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Company policies	1.1. Job-related Standard Operating Procedures (SOPs) and OSH-specific procedures. Examples of OSH procedures include consultation and participation, emergency response, response to specific hazards, incident investigation, risk assessment, reporting arrangements and issue resolution procedures
2. Workplace procedures	2.1. OSH system and related documentation including policies and procedures 2.2. Standard Operating Procedures (SOPs) 2.3. information on hazards and the work process, hazard alerts, safety signs and symbols 2.4. Labels 2.5. Material Safety Data Sheets (MSDSs) and manufacturers' advice.
3. Hazards	3.1 OSH incidents include near misses, injuries, illnesses and property damage, noise, handling hazardous substances, other hazards 3.2 Working with and near moving equipment/load shifting equipment 4.3 Broken or damaged equipment or materials
4. Personal Protective equipment (PPE)	4.1 Goggles 4.2 Ear muffs 4.3 Ear plugs 4.4 Gloves 4.5 Clothing 4.6 Apron 4.7 Helmet 4.8 Boots
<b>Evidence Guide</b> 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 Identified, controlled and reported OSH hazards 1.2 Followed work safety. 1.3 Followed emergency response procedures. 1.4 Maintained and improved health and safety in the workplace.
2. Underpinning knowledge	2.1. Personal protective equipment - Hand gloves, safety shoes, safety goggles, masks, apron, 2.2. Identification of tools and equipment 2.3. Hazardous events 2.4. Tools, equipment, machinery and relevant accessories. 2.5. Communication 2.6. Job roles, responsibilities and compliance 2.7. Workplace laws



3. Underpinning skill	3.1. Ability to use the appropriate PPE. 3.2. Ability to identify tools and equipment. 3.3. Ability to quick response and to take safety precautions for different hazardous situations. 3.4. Ability to operate and use tools, equipment, machinery and accessories properly as per SOP (Company standards). 3.5. Ability to communicate with peers and supervisors. 3.6. Ability to apply in the workplace.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Tools, equipment and physical facilities appropriate to perform activities. 5.2 Materials, consumables to perform activities.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

#### **Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

### **National Technical and Vocational Qualification Framework for Bangladesh Unit of Competency**

<b>Unit Code and Title</b>	<b>GN2003A1: Use English in the workplace</b>
<b>Nominal Hours</b>	<b>70 hours</b>
<b>Unit Descriptor</b>	This unit specifies knowledge, skills and attitude the competency required to able to read, write and understand basic English in the workplace.

<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Read and understand workplace documents in English	1.1 <i>Workplace documents</i> are read and understood. 1.2 <i>Visual information</i> is interpreted.
2. Write simple routine workplace documents in English	2.1 Simple routine workplace documents are prepared using key words, phrases, simple sentences and visual aids where appropriate. 2.2 Key information is written in the appropriate places in standard forms.
3. Listen to conversation in English	3.1 Active listening in English language is demonstrated to the required workplace standard.
4. Perform conversation in English	4.1 Conversation is performed in English with peers, customers and management to the required workplace standard.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Workplace documents	1.1 Schedules and itineraries 1.2 Agenda 1.3 Simple reports such as progress and incident reports 1.4 Job sheets 1.5 Operational manuals 1.6 Brochures and promotional material 1.7 Visual and graphic materials 1.8 Standards 1.9 OSH information
2. Visual information	2.1 Signs 2.2 Maps 2.3 Diagrams 2.4 Forms 2.5 Labels 2.6 Graphs 2.7 Charts
<b>Evidence Guide</b> 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 Used basic English in the workplace 1.2 Read and understood workplace documents in English 1.3 Constructed simple routine workplace documents in English 1.4 Listened to conversation in English

	1.5 Communicated with peers, customers and management using English to the required workplace standard
2. Underpinning knowledge	2.1. Read workplace documents in English 2.2. Write simple routine workplace documents in English 2.3. Listen to conversation in English 2.4. Perform conversation in English 2.5. Interaction skills (i.e., teamwork, interpersonal skills, etc.) 2.6. Job roles, responsibilities and compliances
3. Underpinning skill	3.1. Ability to read and understand workplace documents in English, using appropriate vocabulary and grammar, and standard spelling and punctuation. 3.2. Ability to write simple routine workplace documents in English, such as: Schedules and agendas, job sheets, operational manuals and brochures, and promotional material. 3.3. Ability in active listening in English language is demonstrated to the required workplace standard. 3.4. Ability to perform conversation in English with peers, customers and management, to the required workplace standard. 3.5. Work effectively with others: <ul style="list-style-type: none"> <li>○ listening and questioning skills</li> <li>○ ability to follow simple directions</li> </ul>
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Tools, equipment and physical facilities appropriate to perform activities. 5.2 Materials, consumables needed to perform activities.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

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**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>GN2004A1: Operate in a self-directed team</b>
<b>Nominal Hours</b>	<b>30 hours</b>
<b>Unit Descriptor</b>	This unit specifies the knowledge, skills and attitude to communicate and work within a team in an interactive work environment as per the workplace standard.
<b>Elements of Competency</b>	<b>Performance Criteria</b>  <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify team goals and processes	<p>1.1 <i>Team goals and processes</i> are identified.</p> <p>1.2 Roles and responsibilities of team members are identified</p> <p>1.3 Relationships within team and with other work areas are identified</p>
2. Communicate and cooperate with team members	<p>2.1. Effective interpersonal skills are used to interact with team members and to contribute to activities and objectives.</p> <p>2.2. Formal and informal forms of communication are used effectively to support team achievement.</p> <p>2.3. Diversity is respected and valued in team functioning.</p> <p>2.4. Views and opinions of other team members are understood and reflected accurately.</p> <p>2.5. <i>Workplace staff regulation</i> is used correctly to assist communication.</p>
3. Work as a team member	<p>3.1. Duties, responsibilities, authorities, objectives and task requirements are identified and clarified with team.</p> <p>3.2. Tasks are performed in accordance with organizational and team requirements, specifications and workplace procedures.</p> <p>3.3. Team members support other members as required to ensure team achieves goals and requirements.</p> <p>3.4. Agreed reporting lines are followed using standard operating procedures</p>
4. Solve problems as a team member	<p>4.1 Current and potential problems faced by team are identified.</p> <p>4.2 Procedures for avoiding and managing problems are identified.</p> <p>4.3 Problems are solved effectively and in a manner that supports the team.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range ( May include but not limited to)</b>
1. Team goals and processes	1.1 Identifying the problem 1.2 Consider solutions 1.3 Action 1.4 Follow-up.
2. Workplace staff regulation	2.1. Organization/company’s code of conduct, complaint handling/grievance policies and procedures
<b>Evidence Guide</b>	
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 Communicated and worked within a team in an interactive work environment as per workplace standard. 1.2 Dealt with a range of communication/ information at one time. 1.3 Made constructive contributions in workplace issues 1.4 Presented information clearly and effectively in written form 1.5 Asked appropriate questions 1.6 Provided accurate information
2. Underpinning knowledge	2.1. Organization requirements for written and electronic communication methods 2.2. Effective verbal communication methods
3. Underpinning skill	3.1. Organize information 3.2. Understand and convey intended meaning 3.3. Participate in a variety of workplace discussions 3.4. Comply with Organization’s requirements in the use of written and electronic communication methods
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources MUST be provided: 5.1 Variety of Information

	5.2 Communication tools 5.3 Simulated workplace
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>GN2005A1: Present and apply workplace information</b>
<b>Nominal Hours</b>	<b>30 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude to communicate and deliver up-to-date information in an interactive work environment as per workplace standard.
<b>Elements of Competency</b>	<b>Performance Criteria</b>  <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify information requirements	1.1 <i>Sources of Information</i> requirements in the workplace are identified
2. Process Data	2.1. Data is collected and correlated as per prescribed <i>method</i> . 2.2. Relevant data is used as references in accordance with the objectives of the program. 2.3. Information is applied according to workplace requirements.
3. Analyse, interpret and organize information	3.1. Collected information is analysed, interpret and organize as required for workplace.
4. Apply and present workplace information	4.1 Findings and recommendations are summarized and presented in a user-friendly manner. 4.2 Draft report/ <i>forms</i> are prepared based on standard format. 4.3 Graphs and other visual presentations are prepared to highlight <i>analysis</i> /interpretation of information. 4.4 Reports/forms are submitted and distributed to relevant departments/persons.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to):
1. Sources of information	1.1 Daily job instructions 1.2 Specifications 1.3 Standard operating procedures 1.4 Charts 1.5 Lists 1.6 Documents 1.7 Computer data 1.8 Drawings 1.9 Sketches 1.10 Tables



	<ul style="list-style-type: none"> <li>1.11 Technical manuals and/or charts</li> <li>1.12 Surveys</li> <li>1.13 Interviews</li> <li>1.14 Front-end analysis</li> <li>1.15 Functional analysis</li> </ul>
2. Forms	<ul style="list-style-type: none"> <li>2.1. Questionnaires</li> <li>2.2. Profile</li> <li>2.3. Accident/incident report form</li> <li>2.4. Work order</li> <li>2.5. Purchase order,</li> </ul>
3. Methodologies	<ul style="list-style-type: none"> <li>3.1. Qualitative</li> <li>3.2. Quantitative</li> </ul>
4. Statistical analysis	<ul style="list-style-type: none"> <li>4.1 Average (mean, median, mode)</li> <li>4.2 Percentage</li> <li>4.3 Frequency distribution</li> </ul>
<p><b>Evidence Guide</b>  The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<ul style="list-style-type: none"> <li>1.1 Communicated and delivered current information in an interactive work environment as per workplace standard.</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. Identify information</li> <li>2.2. Identify data</li> <li>2.3. Workplace standard</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Collecting information</li> <li>3.2. Collecting data</li> <li>3.3. Demonstrating, interpreting and/or following data sheet or instruction</li> <li>3.4. Performing task as per data sheet or instruction</li> <li>3.5. Keeping records and reports.</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace.</li> </ul>
5. Resource implication	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>5.1 Tools, equipment and physical facilities appropriate to perform activities.</li> <li>5.2 Materials, consumables needed to perform activities.</li> </ul>
6. Methods of assessment	<ul style="list-style-type: none"> <li>6.1 Demonstration with oral questioning</li> <li>6.2 Direct observation</li> <li>6.3 Written test</li> </ul>

	6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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# **SECTOR SPECIFIC UNITS**

**National Technical and Vocational Qualification Framework for Bangladesh**  
**Unit of Competency**

<b>Unit Code and Title</b>	<b>FODSS1006A1: Follow quality and food safety programs</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to follow food quality and safety programs in the workplace.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements.</p> <p>1.2 Personal hygiene is maintained and <b><i>PPE</i></b> worn as per OSH requirements.</p> <p>1.3 Equipment is cleaned for production and hygiene requirements.</p>
2. Practice personal hygiene and good grooming standards	<p>2.1. Personal hygiene and good grooming is practiced in line with workplace health and safety requirements.</p> <p>2.2. Health conditions and/or illness are reported as required by the food safety program.</p> <p>2.3. <b><i>Clothing and footwear</i></b> is appropriate for the food handling task and meets the requirements of the food safety program.</p> <p>2.4. Movement around the workplace complies with the food safety program.</p>
3. Follow safe food handling and sanitation practices	<p>3.1. Food handling requirements are identified.</p> <p>3.2. Safe food handling practices are followed in line with workplace sanitation regulations and the food safety code.</p> <p>3.3. The workplace is maintained in a clean and tidy order to meet workplace standards.</p>
4. Monitor quality of work outcome	<p>4.1 Quality requirements are identified.</p> <p>4.2 Inputs are inspected to confirm capability to meet quality requirements.</p> <p>4.3 Work is conducted and monitored to produce required outcomes.</p>
5. Identify and act on quality deficits and/or food safety hazards	<p>5.1 Work area, materials, equipment and product are routinely checked to ensure compliance with quality and/or food safety requirements.</p> <p>5.2 <b><i>Processes, practices or conditions</i></b> that are not consistent with quality standards or food safety program are identified.</p>

	<p>5.3 Quality variations and/or <b>food safety</b> hazards are rectified or removed within the level of responsibility and in accordance with workplace procedures.</p> <p>5.4 Quality variations and/or food safety outside the scope of individual responsibility are reported to appropriate personnel according to workplace reporting requirements.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1.PPE (Personal Protective Equipment)	<p>1.1 Protective clothing</p> <p>1.2 Gloves</p> <p>1.3 Hair net</p> <p>1.4 Other PPE as per OSH requirements</p>
2. Food handled and stored	<p>2.1. Raw materials</p> <p>2.2. Ingredients</p> <p>2.3. Consumables</p> <p>2.4. Part-processed product</p> <p>2.5. Finished product</p> <p>2.6. Cleaning materials</p>
3. Processes, practices or conditions	<p>3.1. Methods of receiving and storing food</p> <p>3.2. Food preparation</p> <p>3.3. Cooking</p> <p>3.4. Holding</p> <p>3.5. Cooling</p> <p>3.6. Chilling and reheating</p> <p>3.7. Packaging</p> <p>3.8. Disposal</p>
4. Clothing and footwear	<p>4.1 Purpose designed overalls or uniforms</p> <p>4.2 Hair-nets</p> <p>4.3 Beard snoods</p> <p>4.4 Gloves</p> <p>4.5 Overshoes</p>
5. Food safety	<p>5.1 Failure to check delivery temperatures of potentially hazardous chilled food;</p> <p>5.2 Failure to place temperature-sensitive food in temperature-controlled storage conditions promptly</p> <p>5.3 Failure to wash hands when required</p> <p>5.4 Use of cloths for unsuitable purposes</p>
<b>Special Notes</b>	

**Food Safety Program** is a written document that specifies how a business will control all food safety hazards that may be reasonably expected to occur in all food handling operations of the food business. The food safety program and related procedures must comply with legal requirements of the Food Safety Standards and must be communicated to all food handlers. Where no food safety program is in place, food safety requirements may be specified in general operating procedures.

**Food safety information** may be provided in a food safety program and/or in Standard Operating Procedures (SOPs), specifications, log sheets and written or verbal instruction.

**Appropriate clothing and footwear** depends on work requirements. It should be designed to ensure that the body and clothing itself does not contaminate food or surfaces likely to come into contact with food.

**A food safety hazard** is a biological, chemical or physical agent in, or condition of, food that has the potential to cause an adverse health effect. Examples are bacteria, chemical additives, plastic and glass.

**Responsibility** for monitoring food safety, identifying breaches in food safety procedures and taking corrective action relates to own tasks and responsibilities and occurs in the context of the food safety program in the workplace.

**Responsibility** for monitoring quality relates to immediate work responsibilities and may require visual inspections and checks.

**Monitoring** typically involves visual inspection or checks at control points. Control points refer to those key points in a work process which must be monitored and controlled. This includes food safety (critical) control points.

**Responding** to out-of-specification or unacceptable outcomes at this level typically involves exercising judgment within clearly defined boundaries and reporting/referring to others.

**Minimum personal hygiene requirements** are specified by the workplace food safety program and at a minimum must at least meet legal requirements as set out in the Food Safety Standard.

### 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.

<p>1. Critical aspects of competency</p>	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements.</p> <p>1.2 Personal hygiene is maintained and PPE worn as per OSH requirements.</p> <p>1.3 Equipment and work place is cleaned for production and hygiene requirements.</p> <p>1.4 Quality variations and/or food safety hazards are rectified or removed within the level of responsibility and in accordance with workplace procedures</p>
<p>2. Underpinning knowledge</p>	<p>2.1. Personal protective equipment - hand gloves, safety shoes, safety goggles, masks, apron.</p> <p>2.2. Practice personal hygiene</p> <p>2.3. Rules and regulations to produce quality and safety in food</p> <p>2.4. Control measures for food safety</p> <p>2.5. Food safety hazards</p> <p>2.6. Cleaning, sanitation and waste storage and disposal practices</p>

	<ul style="list-style-type: none"> <li>2.7. Food safety procedures</li> <li>2.8. Monitor quality of work outcome</li> <li>2.9. Hazardous events</li> <li>2.10. Interaction skills (teamwork, networking, interpersonal skills, etc.</li> <li>2.11. Job roles, responsibilities and compliance</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Ability to use the appropriate PPE.</li> <li>3.2. Ability to practise personal hygiene and good grooming in line with workplace health and safety requirements.</li> <li>3.3. Ability to identify food rules and regulations, food grade preservatives and food additives to meet food production safety requirements according to BSTI.</li> <li>3.4. Ability to control 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.)</li> <li>3.5. Understand food safety hazards: biological, chemical or physical agents in, or conditions of, food that have the potential to cause an adverse health effect. Examples are bacteria, chemical additives, plastic, and glass.</li> <li>3.6. Ability to perform waste collection, recycling, handling and disposal. This may include handling/disposal requirements for different types of waste including hazardous waste where relevant.</li> <li>3.7. Ability to perform 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.</li> <li>3.8. Ability to perform food safety and quality responsibilities and requirements relating to the work area.</li> <li>3.9. Ability to respond quickly and to take safety precautions for different hazardous situations.</li> <li>3.10. Ability to apply in the workplace.</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> </ul>

	4.8	Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication		The following resources should be provided 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment		6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1	Competencies may be assessed in the work place or a simulated work place
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>		



## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODSS1007A1: Follow OSH policies and procedures in the food industry</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to apply occupational safety and health (OSH) policies and procedures in a commercial food production work area.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements.</p> <p>1.2 Personal hygiene is maintained and <b>PPE</b> worn as per OSH requirements.</p> <p>1.3 Equipment is cleaned for production and hygiene requirements.</p>
2. Conduct work safely	<p>2.1. <b>Workplace procedures</b> for controlling risks are followed when carrying out work tasks.</p> <p>2.2. <b>Workplace information</b> are interpreted and followed</p>
3. Identify, control and report OSH hazards	<p>3.1. Immediate work area is routinely checked for safety hazards prior to starting and during work.</p> <p>3.2. Hazards and unacceptable performance are identified.</p> <p>3.3. Hazards and unacceptable performance are rectified or removed within the level of responsibility and in accordance with workplace procedures and OSH standards.</p> <p>3.4. <b>OSH hazards and incidents</b> in the work area are reported to appropriate personnel according to workplace procedures.</p>
4. Follow emergency procedures to respond to a hazardous event	<p>4.1 <b>Emergency situations</b> are promptly identified.</p> <p>4.2 Emergency situations are reported to appropriate personnel according to workplace reporting requirements.</p> <p>4.3 Workplace procedures for dealing with accidents, fires and emergencies are followed whenever</p> <p>4.4 Necessary within scope of responsibilities.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May Includes but not limited to)
1. workplace procedures	1.1 Job-related SOPs (standard operating procedures) and OSH-specific procedures. Examples of OSH procedures include consultation and participation, emergency response, response to specific hazards, incident investigation, risk assessment, reporting arrangements and issue resolution procedures.
2. Workplace information	2.1. OSH systems and related documentation including policies and procedures 2.2. Information on hazards and the work process 2.3. hazard alerts 2.4. Safety signs and symbols, labels 2.5. Material Safety Data Sheets (MSDSs) and manufacturers' advice.
3. OSH incidents include	3.1. Near misses, injuries, illnesses and property damage, noise, handling hazardous substances, working with steam and hot services/product, airborne particulates, slip, trip and fall hazards, manual handling, working with 240V power supply, poor ventilation, working in exposed weather conditions, working with combustible materials, working with and near moving equipment/load shifting equipment, broken or damaged equipment or materials.
4. PPE (Personal Protective Equipment)	Protective clothing  5.1 Gloves 5.2 Hair net and other PPE as per OSH requirements.
<b>Evidence Guide</b>	
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 Followed rule and regulation. 1.2 Checked workplaces hazards 1.3 Identified unacceptable performance and report appropriate personnel.
2. Underpinning knowledge	2.1 Selected appropriate PPE. 2.2 Cleaning agents and equipment. 2.3 Personal hygiene and sanitations. 2.4 Food safety and hazards.
3. Underpinning skill	3.1 Ability to use the appropriate PPE. 3.2 Ability to practise personal hygiene and good grooming in line with workplace health and safety requirements.

	<p>3.3 Ability to identify food rules and regulations, food grade preservatives and food additives to meet food production safety requirements according to BSTI.</p> <p>3.4 Ability to identify responsible personnel.</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources should be provided</p> <p>5.1 Tools, equipment and facilities appropriate to the process or activity.</p> <p>5.2 Materials relevant to the proposed activity.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODSS1008A1: Work in the food Industry</b>
<b>Nominal Hours</b>	<b>30 hours</b>
<b>Unit Descriptor</b>	This unit specifies the knowledge, skills and attitude required to identify roles and responsibilities and work in the food industry.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Identify job roles and responsibilities in the food industry	1.1 Job roles and responsibilities in the food industry are identified. 1.2 Relationships within the food industry employees are identified.
2. Identify and observe OSH in the food industry.	2.1. <b>OSH</b> in the food industry is identified and observed. 2.2. Safe work practices are followed when using equipment in the work environment.
3. Plan work activities	3.1. Common goals, objectives and tasks are identified and clarified with appropriate persons. 3.2. Individual tasks are determined and agreed on according to workplace environment.
4. Work with others	4.1 <b>Effective interpersonal skills</b> are applied to interact with others and to contribute to activities and objectives. 4.2 Assigned tasks are performed in accordance with job requirements, specifications and workplace environment. 4.3 Work <b>requirements</b> are confirmed with colleagues.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May Includes but not limited to)
1. OSH	1.1 Personal protective equipment (PPE) 1.2 Apron 1.3 Hair net

	1.4 Hand gloves
2. Effective interpersonal skills	2.1 Basic listening and speaking skills`1 2.2 Use of terminology and jargon 2.3 Communicating and receiving feedback 2.4 Interpretation of instructions, and basic principles of effective communication.
3. Requirements	3.1 Requirements as directed in verbal modes or written in specification or procedures.
<b>Evidence Guide</b>	
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 Followed work place rule and regulation. 1.2 Make a work plan 1.3 Group forming and work with others.
2. Underpinning knowledge	2.1 Positive attitudes for work others. 2.2 Identify own task 2.3 Food sector in Bangladesh 2.4 Job opportunity 2.5 Salary structure for food worker 2.6 Written and oral language communication 2.7 OSH
3. Underpinning skill	3.1 Able to identify task 3.2 Able to communicated with co workers 3.3 Able to communicate with supervisor 3.4 Able to writing report
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources should be provided 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning

	6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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# **OCCUPATION SPECIFIC UNITS**

National Technical and Vocational Qualification Framework for Bangladesh

**Unit of Competency**

<b>Unit Code and Title</b>	<b>FODPAC3009A1: Operate a twist-wrap process</b>
<b>Nominal Hours</b>	<b>30</b>
<b>Unit Descriptor</b>	This unit deals covers the knowledge, skills and attitude required to operate a twist wrap process.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements.</p> <p>1.2 Personal hygiene is maintained and PPE worn as per OSH requirements.</p> <p>1.3 <i>Equipment</i> is cleaned for production and hygiene requirements.</p>
2. Prepare the wrapping materials	<p>2.1. <i>Materials</i> are confirmed and available to meet operating requirements</p> <p>2.2. Parameters are entered to meet safety and packaging requirements</p> <p>2.3. Tools and equipment are arranged in an orderly manner, followed by twist wrap process</p>
3. Equipment and process for operation	<p>3.1. Operating equipment is identified and confirmed</p> <p>3.2. Equipment performance is checked and adjusted as per operating process</p> <p>3.3. Operating procedures are adjusted as per twist wrap process</p>
4. Operate, monitor and test the twist wrap process	<p>4.1 The process is started and operated according to the <i>work schedules records</i></p> <p>4.2 Equipment and process is monitored to ensure wrap operations</p> <p>4.3 Problems during twist wrap process are identified and reported</p> <p>4.4 Wrapping materials and quality are monitored to confirm that specifications are met</p> <p>4.5 Weight and volume of the wrapped products are checked to ensure quality of product</p> <p>4.6 Work schedule records are maintained according to workplace recording requirements</p>
5. Close and check twist wrapping process	<p>5.1 The process is closed according to standard operating procedures.</p>



	5.2	Wrapped products are checked before storage and delivery.
<b>Range of Variables</b>		
<b>Variable</b>	<b>Range</b> (May include but not limited to)	
1. Equipment and Material	1.1	Bunch wrapper
	1.2	Automated product placement equipment
	1.3	Conveyors
	1.4	Wrapping machine
	1.5	Wrapping papers
	1.6	Twist wrapping grades of cellulose film
	1.7	Waxed paper
	1.8	PVC or cast polypropylene
2. Test	2.1.	Check and adjust twist wrap process.
	2.2.	Problems during twist wrap process are identified.
	2.3.	Weight and volume of the wrapped products are checked to ensure quality of product.
3. Work schedule records	3.1.	Production schedules and instructions
	3.2.	Manufacturers advice
	3.3.	Standard operating procedures
<b>Evidence Guide</b>		
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	Operating procedures are adjusted as per twist wrap process.
	1.2	Weight and volume of the wrapped products are checked to ensure quality of product.
	1.3	Work schedule records are maintained according to workplace recording requirements.
2. Underpinning knowledge	2.1.	Hazardous events, types and condition.
	2.2.	Types of wrapping materials and equipment
	2.3.	Twist wrap packaging product.
	2.4.	Job roles, responsibilities and compliances
3. Underpinning skill	3.1.	Using the appropriate PPE and hygienic practices.
	3.2.	Responding quickly and take safety precautions for different hazardous situations.
	3.3.	Selecting proper wrapping materials and equipment
	3.4.	Starting, operating, monitoring and adjusting the

	wrapping equipment – Principles and Procedures 3.5. Testing packaging integrity 3.6. Conforming to workplace standard operating procedures. 3.7. Oral and written communication with peers and supervisors and using simple documents
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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**National Technical and Vocational Qualification Framework for Bangladesh**  
**Unit of Competency**

<b>Unit Code and Title</b>	<b>FODPAC3010A1: Operate a blending, sieving and bagging process.</b>
<b>Nominal Hours</b>	
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to operate a blending, sieving and bagging process. The targets of the unit are workers who are responsible for blending, sieving and bagging process.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe Occupational Safety and Health practices (OSH)	<p>1.1 Housekeeping standards are maintained in the workplace, following OSH requirements</p> <p>1.2 Personal hygiene is maintained, clothing, gloves, hair net etc.</p> <p>1.3 <b>Equipment</b> is cleaned for production and hygiene requirements before and after production.</p>
2. Prepare the blending, sieving and bagging materials	<p>2.1. <b>Materials</b> are selected and confirmed for operating process as required</p> <p>2.2. Packaging components are loaded to meet requirements</p> <p>2.3. Tools and equipment are arranged in an orderly manner as per blending, sieving and bagging process</p>
3. Check equipment is ready for operation	<p>3.1. <b>Equipment</b> is identified and confirmed ready for operation</p> <p>3.2. <b>Equipment</b> performance is checked and adjusted as per operating process</p> <p>3.3. <b>Equipment</b> is adjusted as per blending, sieving and bagging requirements.</p> <p>3.4. Pre-start checks are carried out as required by blending, sieving and bagging process</p>
4. Operate and monitor Blending, sieving and bagging process	<p>4.1 The blending, sieving and bagging process is started and operated according to <b>work schedule records</b>.</p> <p>4.2 <b>Equipment</b> and process are monitored to ensure quality of process.</p>

	<p>4.3 Ingredients are delivered to the sieving in the required quantities and sequence to meet recipe specifications.</p> <p>4.4 Nature and composition of the bagging materials are identified.</p> <p>4.5 Bags are selected for compatibility with the method of preservation.</p> <p>4.6 Environmental factors (temperature and relative humidity) are identified and considered Toxicity of the chemicals from bagging materials are checked to ensure contamination does not occur.</p> <p>4.7 Problems during blending, sieving and bagging are identified and reported.</p>
5. Test the blending, sieving and bagging products	<p>5.1 The blending, sieving and bagging products are tested to ensure they meet quality assurance standards.</p> <p>5.2 Weight and volume of the bagged products are checked to ensure they meet standard requirements.</p> <p>5.3 Checked final packed to ensure proper sealing/sowing.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (May include but not limited to)</b>
1. Equipment	<p>1.1 Blender/grinder</p> <p>1.2 Mesh</p> <p>1.3 Sealer</p> <p>1.4 Conveyors</p> <p>1.5 Weighing equipment</p> <p>1.6 Sieve</p> <p>1.7 Bagging machine.</p> <p>1.8 Automated product placement equipment</p>
2. Test	<p>2.1. Tools and equipment are arranged an orderly manner as per process.</p> <p>2.2. Checked and adjust equipment as per operating process.</p> <p>2.3. Environmental factor test. (Temperature, humidity)</p> <p>2.4. Weight and volume of the bagging products.</p>
3. Work schedule record	<p>3.1. Production schedules and instructions</p> <p>3.2. Manufacturers advice</p> <p>3.3. Standard operating procedures</p>

## 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 <b>Materials</b> are selected and confirmed for operating process as required. 1.2 <b>Equipment</b> is adjusted as per blending, sieving and bagging requirements. 1.3 The blending, sieving and bagging process is started and operated according to <b>work schedule records</b> . 1.4 Ingredients are delivered to the sieving in the required quantities and sequence to meet recipe specifications. 1.5 Checked final packed to ensure proper sealing/sowing.
2. Underpinning knowledge	2.1 <b>Materials</b> are selected and confirmed for operating process as required for Blending, Sieving and Bagging process. 2.2 Tools and equipment are arranged in an orderly manner as per blending, sieving and bagging process. 2.3 <b>Equipment</b> is identified and confirmed ready for operation.
3. Underpinning skill	3.1 Checking <b>Equipment</b> and adjusted as per operating process. 3.2 Pre-starting checks are carried out as required by blending, sieving and bagging process. 3.4 Weight and volume of the bagged products are checking to ensure they meet standard requirements. 3.5 Problems during blending, sieving and bagging are identifying and reporting.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace

5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC2011A1: Operate a case packing process</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to set up, operate, adjust and shut down a case packing process. This is a primary packaging process for using case packing equipment.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe Occupational Safety and Health practices (OSH)	<p>1.1 Housekeeping standards are maintained in the workplace, following OSH requirements</p> <p>1.2 Personal hygiene is maintained, clothing, gloves, hair net etc.</p> <p>1.3 <b>Equipment</b> is cleaned for production and hygiene requirements before and after production.</p>
2. Prepare the case packing process	<p>2.1. Packaging materials are confirmed and available to meet operating process</p> <p>2.2. Products and packaging components are loaded or positioned as required</p>
3. Operate case packing equipment	<p>3.1. Operating equipment is identified and confirmed.</p> <p>3.2. <b>Equipment</b> performance is checked and adjusted as per operating process</p> <p>3.3. Operating techniques are followed as per production requirements</p>
4. Monitor the case packing process	<p>4.1 Packing process is monitored to ensure quality of packaging</p> <p>4.2 Problems during packing are identified and reported according to workplace reporting requirements.</p> <p>4.3 Weight and volume of the packaged products are monitored to ensure quality and specification</p> <p>4.4 <b>Work schedules records</b> are maintained according to workplace recording requirements.</p>
5. Perform close case-packing and Test the case packing process	<p>5.1 The appropriate close case-packing procedure is followed</p> <p>5.2 The case-packing is closed according to job specifications</p> <p>5.3 The appropriate packing process is tested before loading the products into package</p>

	5.4	Inspections/testing are conducted before delivery to ensure quality standards and specifications are met.
<b>Range of Variables</b>		
<b>Variable</b>	<b>Range</b> (May include but not limited to):	
1. Equipment and Material	1.1	Case Packing machine depends on the nature of foods, e.g. Sealer machine, Metal detectors, Check weighers, Conveyors, Screw etc.
	1.2	Plastic case
	1.3	Frame
	1.4	Carton
	1.5	Secondary packing boxes
	1.6	Bags or others containers
	1.7	Polyethylene.
2. Test	2.1.	Tools and equipment are arranged an orderly manner as per process.
	2.2.	Checked and adjust equipment as per operating process.
	2.3.	Weight and volume of the case products.
3. Work schedule record	3.1.	Production schedules and instructions
	3.2.	Manufacturers advice
	3.3.	Standard operating procedures
<b>Special Notes</b>		
The targets of this unit are workers who are responsible for applying knowledge in the case packing process and associated equipment.		
<b>Evidence Guide</b>		
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	Products and packaging components are loaded or positioned as required.
	1.2	<b>Equipment</b> performance is checked and adjusted as per operating process.
	1.3	Packing process is monitored to ensure quality of packaging.
	1.4	Problems during packing are identified and reported according to workplace reporting requirements.
	1.5	Weight and volume of the packaged products are monitored to ensure quality and specification.
	1.6	The appropriate packing process is tested before loading the products into package.



2. Underpinning knowledge	2.1. Packaging materials are confirmed and available to meet operating process. 2.2. Operating techniques are followed as per production requirements
3. Underpinning skill	3.1. Products and packaging components are loading or positioning as required. 3.2. Operating equipment is identified and confirmed. 3.3. Problems during packing are identifying and reporting according to workplace reporting requirements. 3.4. <b>Work schedule records</b> are maintained according to workplace recording requirements. 3.5. Inspections/testing are conducted before delivery to ensure quality standards and specifications are met.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

#### **Accreditation Requirements**

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC3012A1: Operate injection blow moulding equipment.</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This unit specifies the competency of knowledge, skills and attitude required to operate injection blow moulding equipment and resolving routine problems and procedure.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices.	<p>1.1 Housekeeping standards are maintained in the workplace, following OSH requirements</p> <p>1.2 Personal hygiene is maintained, clothing, gloves hair net etc.</p> <p>1.3 <i>Equipment</i> is cleaned for production and hygiene requirements before and after production.</p>
2. Prepare the process	<p>2.1. Materials are confirmed and available to meet operating requirements.</p> <p>2.2. Work requirements are identified for the operation process.</p> <p>2.3. Operating factors are entered to meet operation requirements.</p> <p>2.4. Related equipment are arranged in an orderly manner.</p>
3. Operate the injection blow moulding equipment	<p>3.1. Raw materials are checked before starting operation.</p> <p>3.2. Safety gates and guards are checked before operation.</p> <p>3.3. Operating procedures are selected.</p> <p>3.4. Pre-start checks are carried out as required.</p> <p>3.5. Operating temperature checked before start of production (hydraulic components).</p>
4. Monitor the injection blow moulding process	<p>4.1 The process is started and operated according to the work requirements.</p> <p>4.2 Equipment and process are monitored to ensure injection blow moulding operations meet quality standards.</p> <p>4.3 Problems during moulding are identified and reported.</p> <p>4.4 Log books and <i>work schedule records</i> are maintained.</p>
5. Shutdown the blow moulding process	<p>5.1 The appropriate shutdown procedure is followed</p>

	5.2 Quality problems are identified and rectified.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to):
1. Equipment and materials	1.1 Hydraulic injection blow moulding machine, feed hoppers, feed components frame, Injection blow unit 1.2 Screw plasticization unit 1.3 Barrel 1.4 Pneumatic 1.5 Electrical 1.6 Chillers/cooling towers 1.7 Hoppers driers 1.8 Mixing hoppers 1.9 Dehumidifying driers 1.10 Air compressors 1.11 Dosing machines 1.12 Colour blending equipment 1.13 Die/mould tool additional equipment 1.14 Die heating equipment 1.15 Conveyors 1.16 Plastic resin
2. Test	2.1. Operating factors are entered to meet operation requirements. 2.2. Safety gates and guards are checked before operation. 2.3. Operating temperature checked before start of production. 2.4. Problem during moulding are identified and reported.
2. Work schedule record	2.1. Production schedules and instructions 2.2. Manufacturers advice 2.3. Standard operating procedures
<b>Special Notes</b>	
The targets of the unit are operators who are responsible for applying the operation of injection blow moulding equipment. This unit deals with the performance of workers operating either individually or as a part of a team.	
<b>Evidence Guide</b>	
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 Work requirements are identified for the operation process. 1.2 Operating factors are entered to meet operation requirements.

	<p>1.3 Safety gates and guards are checked before operation.</p> <p>1.4 Operating temperature checked before start of production (hydraulic components).</p> <p>1.5 Equipment and process are monitored to ensure injection blow moulding operations meet quality standards.</p>
2. Underpinning knowledge	<p>2.1. Materials are confirmed and available to meet operating requirements.</p> <p>2.2. Related equipment is arranged in an orderly manner.</p> <p>2.3. Raw materials are checked before starting operation.</p> <p>2.4. The process is started and operated according to the work requirements.</p> <p>2.5. Problems during moulding are identified and reported.</p>
3. Underpinning skill	<p>3.1. Operating procedures are selecting.</p> <p>3.2. Pre-starting and checking are carried out as required.</p> <p>3.3. Log books and <i>work schedule records</i> are maintaining.</p> <p>3.4. Quality problems are identifying and rectifying.</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources should be provided:</p> <p>5.1 Tools, equipment and facilities appropriate to the process or activity.</p> <p>5.2 Materials relevant to the proposed activity.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>

### Accreditation Requirements

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC3013A1: Operate a high speed wrapping process</b>
<b>Nominal Hours</b>	<b>40</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to operate and closing a primary packaging with high speed wrapping process to enclose product in a sealed, airtight film/cello package.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe Occupational Safety and Health practices (OSH)	<p>1.1 Housekeeping standards are maintained in the workplace, following OSH requirements.</p> <p>1.2 Personal hygiene is maintained, clothing, gloves, hair net etc.</p> <p>1.3 <i>Equipment</i> is cleaned for production and hygiene requirements before and after production.</p>
2. Prepare the wrapping materials	<p>2.1. <i>Materials</i> are confirmed and available to meet operating requirements.</p> <p>2.2. Packaging components are loaded to meet requirements.</p> <p>2.3. Tools and equipment are arranged in an orderly fashion.</p>
3. Check equipment ready for operation	<p>3.1. Operating equipment is identified and confirmed.</p> <p>3.2. <i>Equipment</i> performance is checked and adjusted as per operating process</p> <p>3.3. Operating techniques are adjusted as per wrapping requirements.</p> <p>3.4. Pre-start checks are carried out as required by wrapping process</p>
4. Operate and monitor the wrapping process	<p>4.1 The process is started and operated according to the work schedules.</p> <p>4.2 <i>Equipment</i> and process are monitored to ensure wrapping operations meet quality standard.</p> <p>4.3 Problems during wrapping are identified and reported according to workplace procedures.</p> <p>4.4 Wrapping materials and quality are monitored to confirm that specifications are met.</p> <p>4.5 Weight and volume of wrapped products are checked.</p> <p>4.6 <i>Work schedule records</i> are maintained according to workplace recording requirements.</p>

5. Close the wrapping procedures and check the wrapping.	5.1 The appropriate closing procedure is followed. 5.2 Maintenance requirements are identified and rectified. 5.3 Wrapped products are checked before storage and delivery.
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### Range of Variables

Variable	Range ( May include but not limited to)
1. Equipment and material	1.1 Wrapper machine 1.2 Check weighers and ink jet coders 1.3 Conveyors 1.4 Labellers 1.5 Box closers and ink jet coders 1.6 Metal detectors 1.7 Automated product placement equipment 1.8 Wrapping materials 1.9 Labels 1.10 Heat/shrink wrappers 1.11 Boxes 1.12 Bags or other containers
2. Test	2.1. Tools and equipment are arranged and adjustment as per operating process. 2.2. Problems during wrapping are identified and reported according to workplace procedures. 2.3. Wrapped products are checked (Weight, volume).
3. Work schedule record	3.1. Production schedules and instructions 3.2. Manufacturers advice 3.3. Standard operating procedures

### 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 Packaging components are loaded to meet requirements and Tools and equipment are arranged in an orderly fashion. 1.2 <b>Equipment</b> performance is checked and adjusted as per operating process. 1.3 Problems during wrapping are identified and reported according to workplace procedures. 1.4 Wrapped products are checked before storage and delivery.
2. Underpinning knowledge	2.1. Personal protective equipment - Hand gloves, safety shoes, safety goggles, masks, apron

	<p>2.2. Hazardous events</p> <p>2.3. Selection of wrapping materials and equipment</p> <p>2.4. Starting, operating, monitoring and adjusting wrapping equipment – Principles, Procedures and Techniques</p> <p>2.5. Seal integrity</p> <p>2.6. Oral and written communication using simple documents</p> <p>2.7. Job roles, responsibilities and compliances</p>
3. Underpinning skill	<p>3.1. Using the appropriate PPE and hygienic practices</p> <p>3.2. Responding quickly and take safety precautions for different hazardous situations</p> <p>3.3. Selecting proper wrapping materials and equipment</p> <p>3.4. Starting, operating, monitoring and adjusting the wrapping equipment</p> <p>3.5. Testing packaging integrity</p> <p>3.6. Conforming to workplace standard operating procedures.</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources should be provided:</p> <p>5.1 Tools, equipment and facilities appropriate to the process or activity.</p> <p>5.2 Materials relevant to the proposed activity.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p>

### **Accreditation Requirements**

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC2014A1 - Operate a form, fill and seal process</b>
<b>Nominal Hours</b>	<b>90 Hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to set up, operate, adjust and shut down a form, fill and seal process.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices.	<p>1.1 Housekeeping standards are maintained in the workplace, following OSH requirements</p> <p>1.2 Maintain personal hygiene, clothing, gloves, hair net etc</p> <p>1.3 <i>Equipment</i> is cleaned for production and hygiene requirements before and after production.</p>
2. Prepare the forming process	<p>2.1. <i>Materials</i> are confirmed and available to meet operating requirements.</p> <p>2.2. Necessary utilities are confirmed as available and ready for operation.</p> <p>2.3. Tools and equipment are arranged in an orderly fashion</p>
3. Operate Filling and sealing equipment	<p>3.1. Operating equipment is identified and confirmed</p> <p>3.2. Equipment performance is checked and adjusted as per operating process.</p> <p>3.3. Operating procedures are followed</p> <p>3.4. Pre-start checks are carried out as required by production process.</p>
4. Monitor the filling and sealing process	<p>4.1 Equipment and process are monitored to ensure quality of production</p> <p>4.2 Any problems involving equipment and process are identified and rectified.</p> <p>4.3 Weight and volume of the filled and sealed products are checked to ensure quality and standard.</p> <p>4.4 <i>Work schedules</i> are maintained according to workplace recording requirements.</p>
5. Close and test the filling and	5.1 The appropriate closing procedure is followed



sealing process.	<p>5.2 The process is closed according to work place standards.</p> <p>5.3 Maintenance requirements are identified and rectified.</p> <p>5.4 The correct fill-weight is <i>tested</i> before sealing of the products.</p> <p>5.5 The seal on the product is tested to ensure it meets quality standard.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to):
1. Equipment and materials	<p>1.1 Crown cork sealer</p> <p>1.2 Polyethylene sealer</p> <p>1.3 Plastic Bag Sealing Machine</p> <p>1.4 Vacuum bag sealer</p> <p>1.5 Aluminium foil sealer</p> <p>1.6 Gas mixing machine with tanks for sealing</p> <p>1.7 Controller for Retort (Air)</p> <p>1.8 Automatic Form/Filling/Sealing Machine(Nitrogen pack)</p> <p>1.9 Plastic</p> <p>1.10 Laminates</p> <p>1.11 Paper</p> <p>1.12 Carton</p> <p>1.13 Polyethylene pouches</p> <p>1.14 Aluminium pouches</p> <p>1.15 Metalex foil pouches</p>
2. Test	<p>2.1. Tools and equipment are arranged in an orderly.</p> <p>2.2. Equipment checked and adjusted as per operation process.</p> <p>2.3. Weight and volume of the filled and sealed products are checked.</p> <p>2.4. The seal on the products is tested to ensure it meets quality standard.</p>
3. Work schedule record	<p>3.1. Production schedules and instructions</p> <p>3.2. Manufacturers advice</p> <p>3.3. Standard operating procedures</p>

### Special Notes

This is a primary packaging process to package product into appropriate packaging. It can apply to both aseptic and non-aseptic form and fill processes. The targets of the unit are worker who are responsible for applying basic principles of operation and monitoring of a forming, filling and sealing process and associated equipment.

### 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 Equipment performance is checked and adjusted as per operating process. 1.2 Weight and volume of the filled and sealed products are checked to ensure quality and standard. 1.3 The correct fill-weight is tested before sealing of the products. 1.4 The seal on the product is tested to ensure it meets quality standard.
2. Underpinning knowledge	2.1. Equipment is cleaned for production and hygiene requirements before and after production. 2.2. Necessary utilities are confirmed as available and ready for operation. 2.3. Pre-start checks are carried out as required by production process. 2.4. Work schedules are maintained according to workplace recording requirements. 2.5. The process is closed according to work place standards.
3. Underpinning skill	3.1. Equipment performance is checking and adjusting as per operating process. 3.2. Any problems involving equipment and process are identified and rectified. 3.3. Weighting and volume of the filled and sealed products are checked to ensure quality and standard. 3.4. Pre-starting checks are carried out as required by production process. 3.5. The seal on the product is testing to ensure it meets quality standard.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties

	4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC3015A1: Operate blow moulding equipment</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitude required to the operation of blow moulding equipment and resolving routine problems in procedure.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements.</p> <p>1.2 Personal hygiene is maintained and PPE worn as per OSH requirements.</p> <p>1.3 <i>Equipment</i> is cleaned for production and hygiene requirements.</p>
2. Identify work requirements	<p>2.1. Work requirements are identified</p> <p>2.2. Hazards associated with the job are identified .</p>
3. Check work requirements and Prepare the blow moulding equipment.	<p>3.1. Product, <i>materials</i> and equipment are checked before operation</p> <p>3.2. Pre-operational performance is checked in accordance with work place standards.</p> <p>3.3. Housekeeping requirements are checked and ensured.</p> <p>3.4. <i>Equipment</i> is prepared as per operation schedule.</p> <p>3.5. Parameters are entered to suit the operation.</p> <p>3.6. <i>Equipment is</i> arranged in an orderly manner, ready for operation.</p>
4. Operate blow moulding Equipment and Monitor the blow moulding process	<p><b>5.1</b> The <i>equipment</i> is operated according to the <i>work schedule records</i>.</p> <p>5.2 The process is monitored to ensure production efficiency.</p> <p>5.3 Problems are identified and recorded during operation.</p>
5. Check the product and Shut down the blow moulding process.	<p>7.1 Final products are checked before shutdown of the process.</p>

	7.2 The process is shut down according to standard operating procedures.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Equipment and Materials	<ul style="list-style-type: none"> <li>1.1 Blow moulding</li> <li>1.2 Screw plastification unit</li> <li>1.3 Blow unit</li> <li>1.4 Barrel, Screw</li> <li>1.5 Hand tools used in the blow moulding process</li> <li>1.6 Material loading equipment used for loading of raw materials</li> <li>1.7 Pre-blow and pre-squeeze, parison stretching and parison orientation type machines</li> <li>1.8 Bottom blow, top blow, needle blow, tail to tail blow, parison</li> <li>1.9 Ancillary equipment (such as chillers/cooling towers, die heating equipment, hopper driers, mixing hoppers, dehumidifying driers, air compressors, dosing machines, colour blending equipment and conveyors)</li> <li>1.10 Polypropylene</li> <li>1.11 Polyethylene (HDPE,LDPE,ALP)</li> <li>1.12 Twist wrap fill</li> </ul>
2. Test	<ul style="list-style-type: none"> <li>2.1. Operational performance checked.</li> <li>2.2. Equipment arranged and operation.</li> <li>2.3. Problem identified and record during operation.</li> <li>2.4. Final products are checked before shutdown of the process.</li> </ul>
3. Work schedule records	<ul style="list-style-type: none"> <li>3.1. Production schedules and instructions</li> <li>3.2. Manufacturers advice</li> <li>3.3. Standard operating procedures</li> </ul>
<b>Special Notes</b>	
The target trainees of this unit are operators who are responsible for applying the operation of blow moulding equipment	
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	

<p>1. Critical aspects of competency</p>	<p>1.1 <b>Equipment</b> is cleaned for production and hygiene requirements.</p> <p>1.2 Hazards associated with the job are identified .</p> <p>1.3 Pre-operational performance is checked in accordance with work place standards.</p> <p>1.4 <b>Equipment is</b> prepared and arranged in an orderly manner, ready for operation.</p> <p>1.5 The process is monitored to ensure production efficiency.</p> <p>1.6 Problems are identified and recorded during operation.</p> <p>1.7 Final products are checked before shutdown of the process.</p>
<p>2. Underpinning knowledge</p>	<p>2.1. Personal protective equipment (Hand gloves, safety shoes, safety goggles, masks, apron etc.)</p> <p>2.2. Hazardous events</p> <p>2.3. Operational knowledge of materials, equipment and process</p> <p>2.4. Blow Moulding and shutdown process, procedures and techniques</p> <p>2.5. Oral and written communication using simple documents</p> <p>2.6. Job roles, responsibilities and compliances</p>
<p>3. Underpinning skill</p>	<p>3.1. Using the appropriate PPE and hygienic practices.</p> <p>3.2. Respond quickly and taking safety precautions for different hazardous situations.</p> <p>3.3. Selecting proper materials, equipment and process.</p> <p>3.4. Blow mould products and carrying out appropriate shut down process</p> <p>3.5. Conforming to workplace standard operating procedures.</p>
<p>4. Required attitude</p>	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>

5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC3016A1: Fill and close product in cans</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to set up, adjust, operate and shut down a primary packaging process that fills product into cans and hermetically seals containers using a closer or seamer.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements.</p> <p>1.2 Personal hygiene is maintained and PPE worn as per OSH requirements.</p> <p>1.3 Equipment is cleaned for production and hygiene requirements.</p>
2. Prepare the filling process for operation	<p>2.1. <i>Materials</i> and packaging components are identified.</p> <p>2.2. Cleaning status and maintenance requirements are confirmed.</p> <p>2.3. Machine components and related attachments are adjusted to meet operating requirements</p> <p>2.4. Operating factors are entered as required to meet safety and production requirements</p> <p>2.5. <i>Equipment</i> performance is checked as required standards</p>
3. Operate the canning process	<p>3.1. The process is operated according to workplace procedures.</p> <p>3.2. Washing and sterilizing of the cans are carried out according to workplace standards.</p> <p>3.3. Capacity of the cans is identified.</p> <p>3.4. The cans are positioned to fill the products according to the required standards</p> <p>3.5. Filling standards are followed to maintain quality of the processed products</p>
4. Monitor the filling, closing process, Exhaust and seam filled cans.	<p>4.1 The process is monitored to confirm that the cans are filled according to the required standards</p> <p>4.2 The pH and brix of the canned products are</p>



	<p>checked and <i>recorded</i>.</p> <p>4.3 The process is closed according to Standard Operating Procedures (SOP).</p> <p>4.4 The filled cans are exhausted as required</p> <p>4.5 The exhausted cans are checked for its double seamed and inverted</p> <p>4.6 Washing of cans are ensured with detergent</p>
5. Retort and cool the cans, Monitor coding process, Label, Test and store the canned products.	<p>5.1 The sealed cans are heated in retort as required</p> <p>5.2 Cooling of cans are ensured soon after processed.</p> <p>5.3 The Coding process is monitored.</p> <p>5.4 Cans are labelled according required standard.</p> <p>5.5 Cans are tested according to required standard before storage.</p> <p>5.6 Cans are stored according to good housekeeping procedure (GHP).</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Equipment/Machine and Materials components	<p>1.1 Crown cork sealer</p> <p>1.2 Polyethylene sealer</p> <p>1.3 Can sealer</p> <p>1.4 Plastic Bag Sealing Machine</p> <p>1.5 Vacuum bag sealer</p> <p>1.6 Aluminium foil sealer</p> <p>1.7 Gas mixing machine with tanks for sealing</p> <p>1.8 Can Closing Machine</p> <p>1.9 Can Closing Machine (Vacuum)</p> <p>1.10 Controller for Retort (Air)</p> <p>1.11 Can Filling Machine</p> <p>1.12 Can Filling Machine</p> <p>1.13 Can Closing Machine with accessories</p> <p>1.14 Automatic Filling/Sealing Machine(Nitrogen pack)</p> <p>1.15 Can</p> <p>1.16 Plastic</p> <p>1.17 Laminates</p> <p>1.18 Paper</p> <p>1.19 Carton</p> <p>1.20 Polyethylene pouches</p>
2. Test	<p>2.1. Equipment performance checked.</p> <p>2.2. Can close process checked.</p> <p>2.3. Sealed can checked.</p> <p>2.4. Final products are checked before shutdown of the process.</p>

3. Work schedule records	<ul style="list-style-type: none"> <li>3.1. Production schedules and instructions</li> <li>3.2. Manufacturers advice</li> <li>3.3. Standard operating procedures</li> </ul>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<ul style="list-style-type: none"> <li>1.1 Operating factors are entered as required to meet safety and production requirements.</li> <li>1.2 Washing and sterilizing of the cans are carried out according to workplace standards.</li> <li>1.3 The pH and brix of the canned products are checked .</li> <li>1.4 Cans are labelled according required standard and tested before storage.</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. OSH hazards and controls</li> <li>2.2. Operating principles and techniques of equipment</li> <li>2.3. Effect of raw materials characteristics on filling and seaming</li> <li>2.4. Quality characteristics of the filled and closed container</li> <li>2.5. Filling and closing process</li> <li>2.6. Emergency and routine shut down process</li> <li>2.7. Environmental issues</li> <li>2.8. Job roles, responsibilities and compliances</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Using personal protective cloths, any sign of wear, protective equipment, safety guards and housekeeping standards</li> <li>3.2. Applying the equipment operating techniques, application, purpose and location of sensors and related feedback instrumentation</li> <li>3.3. Selecting proper raw materials for canning purpose</li> <li>3.4. Assessing seam components and integrity requirements within level of responsibility for inspection.</li> <li>3.5. Monitoring the filling and closing process.</li> <li>3.6. Identifying the toxicity of the recycling canning materials and controlling measures of the waste products.</li> <li>3.7. Conforming to workplace standard operating procedures and report production and performance information.</li> </ul>

4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC3017A1: Fill and close product in bottles</b>
<b>Nominal Hours</b>	<b>40</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to fill and close product in bottles. The targets of the unit is worker who are responsible for applying basic principles of filling and closing products into bottles and associated equipment.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements.</p> <p>1.2 Personal hygiene is maintained and PPE worn as per OSH requirements.</p> <p>1.3 <i>Equipment</i> is cleaned for production and hygiene requirements.</p>
2. Prepare the filling process for operation	<p>2.1 <i>Materials</i> and packaging components are confirmed and available to meet operating requirements</p> <p>2.2 Performance and status of bottles are checked before bottling of the products</p> <p>2.3 Essential equipment and related attachments are adjusted to meet operating requirements</p> <p>2.4 Equipment performance is checked and adjusted as required</p> <p>2.5 Method of selection of the products are chalked out</p> <p>2.6 Operating parameters are entered as required to avoid contamination of bottled products</p>
3. Select the containers	<p>3.1 The containers are selected on the basis of economical point of view</p> <p>3.2 The containers are selected to ensure quality and safety of the products</p> <p>3.3 Capacity of the containers is identified.</p>

4. Fill product and Monitor filling process	4.1 Washing and sterilizing of the bottles are carried out according to workplace standards. 4.2 Filling standards are followed to maintain quality of the processed products. 4.3 The process is monitored to ensure proper filling and quality of the bottles. 4.4 Problems during filling are identified and reported. 4.5 Weight, volume and gas pressure of the filled products are monitored.
5. Close and test the filling process	5.1 The process is closed according to Standard Operating Procedures (SOP). 5.2 Closed products are tested before delivery and storage.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Equipment, Tools and Materials	1.1 Washing (Bottle) machine 1.2 Transfer pump with Reception tank 1.3 Refiner 1.4 Mixing tank with shaker 1.5 Tubular pasteurizer 1.6 Crown cork sealer 1.7 Knife 1.8 Wrenches 1.9 Hammer 1.10 Pressure Tester Bottle 1.11 Cap 1.12 Liquid food products
2. Test	2.1. Equipment performance checked. 2.2. Bottles close process checked. 2.3. Sealed bottles checked. 2.4. Final products are checked before shutdown of the process.
<b>Evidence Guide</b>  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	2.1. Performance and status of bottles are checked before bottling of the products. 2.2. Operating parameters are entered as required to avoid contamination of bottled products.

	<p>2.3. Washing and sterilizing of the bottles are carried out according to workplace standards.</p> <p>2.4. Problems during filling are identified and reported.</p> <p>2.5. Weight, volume and gas pressure of the filled products are monitored.</p> <p>2.6. Closed products are tested before delivery and storage.</p>
2. Underpinning knowledge	<p>2.1. Personal protective equipment</p> <p>2.2. (Hand gloves, safety shoes, safety goggles, masks, apron etc.)</p> <p>2.3. Hazardous events</p> <p>2.4. Purpose and principles of different bottles</p> <p>2.5. Purpose and principles of basic filling and closing equipment and machineries</p> <p>2.6. Purpose and principles of filling and closing process</p> <p>2.7. Procedures and Techniques of filling and closing products</p> <p>2.8. Oral and written communication using simple documents</p> <p>2.9. Job roles, responsibilities and compliances</p>
3. Underpinning skill	<p>3.1. Using the appropriate PPE and hygienic practices.</p> <p>3.2. Responding quickly and to take safety precautions for different hazardous situations.</p> <p>3.3. Selecting proper materials, chemicals and accessories.</p> <p>3.4. Operating and use tools, equipment and machineries properly (Company standards).</p> <p>3.5. Filling and closing product into bottles</p> <p>3.6. Conforming to workplace standard operating procedures.</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>

5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC2018A1: Operate a blister packaging process</b>
<b>Nominal Hours</b>	<b>70 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude to operate a blister packaging process in the food industry.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe OSH practices	<p>1.1 Housekeeping standards are maintained in the workplace following OSH requirements</p> <p>1.2 Personal hygiene is maintained and PPE worn as per OSH requirements</p> <p>1.3 <i>Equipment</i> is cleaned for production and hygiene requirements</p>
2. Prepare materials and equipment for operation	<p>2.1. <i>Materials</i> are confirmed and available for production</p> <p>2.2. Operating equipment is identified and confirmed</p> <p>2.3. Equipment performance is checked and adjusted as per operating process</p> <p>2.4. Pre-start checks are carried out as required by operating process</p> <p>2.5. Tools and equipment are arranged ready for operating process</p>
3. Operate and monitor the fill and seal process	<p>3.1. The process is started and operated according to <i>work schedules</i></p> <p>3.2. Fill and seal process is done as per requirement.</p> <p>3.3. Blister line is monitored to ensure proper filling and sealing process</p> <p>3.4. Size and cavity of the blistered package is monitored</p> <p>3.5. roubles in the process are reported and rectified</p>
4. Close the filling process and test the filling and sealing process.	<p>4.1 The appropriate closing procedure is followed.</p> <p>4.2 The process is closed according to work place standards.</p> <p>4.3 Maintenance requirements are identified and rectified.</p>



	4.4	The correct fill-weight is <i>tested</i> before sealing of the products.
	4.5	The seal on the product is tested to ensure it meets quality standard.
5. Check the final product	5.1	The final product is check to ensure it meets the quality standard as set out by the workplace.
<b>Range of Variables</b>		
<b>Variable</b>	<b>Range</b> (May include but not limited to):	
1. Equipment and Materials	1.1	Automatic blister packaging machine
	1.2	Heat sealer
	1.3	Digital slide callipers
	1.4	Box closers
	1.5	Conveyors
	1.6	Plastic Box
	1.7	Blister tray
	1.8	Aluminium laminated pouch
	1.9	Sealing type blister packaging materials.
	1.10	Biscuits, chocolate, cookies, Medicine etc.
2. Test	2.1.	Fill and seal process by visual checked.
	2.2.	Blistering line, size and cavity checked.
	2.3.	Final product checked and ensure quality standard.
3. Work schedule record	3.1.	Production schedules and instructions
	3.2.	Manufacturers advice
	3.3.	Standard operating procedures
<b>Special Notes :</b>		
Bangladesh Standard and Testing Institution. <a href="http://www.bsti.gov.bd">www.bsti.gov.bd</a> and other related international standards		
<b>Evidence Guide</b>		
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	Equipment performance is checked and adjusted as per operating process.
	1.2	Tools and equipment are arranged ready for operating process.
	1.3	Blister line is monitored to ensure proper filling and sealing process .
	1.4	Size and cavity of the blistered package is monitored.
	1.5	The final product is check to ensure it meets the quality standard as set out by the workplace.

2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. Personal protective equipment- Hand gloves, safety shoes, safety goggles, masks, apron,</li> <li>2.2. Hazard types</li> <li>2.3. Types of blister packaging materials and equipment</li> <li>2.4. Seal integrity</li> <li>2.5. Oral and written communication using simple documents</li> <li>2.6. Job roles, responsibilities and compliances</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Ability to using the appropriate PPE.</li> <li>3.2. Ability to quick response and to taking safety precautions for different hazardous situations.</li> <li>3.3. Ability to selecting proper blister packaging materials and equipment</li> <li>3.4. Ability to starting, operating, monitoring and adjust the blister equipment.</li> <li>3.5. Ability to testing packaging integrity.</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace</li> </ul>
5. Resource implication	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>5.1 Tools, equipment and facilities appropriate to the process or activity.</li> <li>5.2 Materials relevant to the proposed activity.</li> </ul>
6. Methods of assessment	<ul style="list-style-type: none"> <li>6.1 Demonstration with oral questioning</li> <li>6.2 Direct observation</li> <li>6.3 Written test</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competencies may be assessed in the work place or a simulated work place</li> </ul>

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>FODPAC4019A1: Participate in a Hazard Analysis and Critical Control Points (HACCP) team</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit deals with knowledge, skills and attitude required to the prevention of physical, chemical or microbial contamination of food. It is an integrated food safety program and includes Good Agricultural Practices ( <b>GAP</b> ), Good Manufacturing Practices ( <b>GMP</b> ), and Sanitation Standard Operating Procedures ( <b>SSOP</b> ).
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable
1. Observe Occupational Safety and Health practices (OSH)	1.1 Safe work practices observed and PPE worn as required for the work performed
2. Form a HACCP team	2.1. Roles and regulations for food safety are developed for execution 2.2. Responsibilities of team members in the HACCP team are <i>identified</i> 2.3. Application of GAP for production and GMP for packing houses are verified by the HACCP team 2.4. Team assures that appropriate practices are in place. 2.5. Provide leadership in a variety of situations.
3. Identify and/or review food safety hazards	3.1. Potential sources of microbiological, chemical and physical hazards are <i>identified</i> . 3.2. Control mechanisms for each hazard are <i>identified</i> .
4. Establish Critical Control Point, Critical Control Limits and a Monitoring System.	4.1 Critical Control Points are <i>established</i> . 4.2 Critical limits for taking corrective action are set to prevent potential hazards. 4.3 Monitoring system is <i>established</i> according to standard operating procedures (SOP)
5. Establish corrective action procedure, verification system and a record keeping system.	5.1 Corrective action procedure is <i>established</i> according to standard procedures. 5.2 Verification system is <i>established</i> according to standard procedures. 5.3 Respond quickly and take safety precautions for different hazardous situations 5.4 Related paper work to the HACCP system is recorded. 5.5 All critical control points are <i>work recorded</i> .

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to):
1. Identify	1.1 Potential sources of microbiological, chemical and physical hazards are identified. 1.2 Control mechanisms for each hazard are identified.
2. Establish	2.1. Critical Control Points are established. 2.2. Critical limits for taking corrective action are set to prevent potential hazards. 2.3. Monitoring system is established according to standard operating procedures (SOP). 2.4. Corrective action procedure is established according to standard procedures. 2.5. Verification system is established according to standard procedures.
3. Work records	3.1. SOP Standard Operating Procedures 3.2. GAP Good Agricultural Practices 3.3. GMP Good Manufacturing Practices 3.4. SSOP Sanitation Standard Operating Procedures
<b>Evidence Guide</b>	
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 Potential sources of microbiological, chemical and physical hazards are identified. 1.2 Critical Control Points are established. 1.3 Critical limits for taking corrective action are set to prevent potential hazards. 1.4 Corrective action procedure is established according to standard procedures. 1.5 Verification system is established according to standard procedures.
2. Underpinning knowledge	2.1. Personal protective equipment - Hand gloves, safety shoes, safety goggles, masks, apron 2.2. HACCP team and its formation 2.3. Food Safety Hazards and their Sources 2.4. Critical Control Points 2.5. Critical Control Limits 2.6. Monitoring System for each CCP 2.7. Corrective action procedure 2.8. Verification procedures 2.9. Documentation and Record Keeping 2.10. Hazardous events

	2.11. Interaction skills (i.e., teamwork, mentoring, leadership, networking, interpersonal skills, etc.)
3. Underpinning skill	<p>3.1. Using the appropriate PPE and hygienic practices.</p> <p>3.2. Identifying the constitution of the HACCP team and the responsibilities of HACCP team members (such as Project leader – Convenes and chair meeting and ensure that HACCP principles are correctly applied, Production manager- Construction flow charts and advises on production issues and process capability, Technical expert- Advises on technical issues, Engineer and others)</p> <p>3.3. Identifying the food safety hazards such as: Biological hazards (Food-borne infection and intoxication), Chemical hazards (Heavy metals -Lead, tin, copper Food additives - preservatives, colourings), Physical hazards (insects, spiders, parts of animals, metals, machine parts, plastics objects, sand, stone etc.)</p> <p>3.4. Identifying the sources of hazards such as: raw materials, processing steps, machinery, handling of foods, ingredients and environmental condition</p> <p>3.5. Determine the Critical Control Points</p> <p>3.6. Identifying the monitoring system for each CCP based on standard procedures</p> <p>3.7. Determine the corrective action procedure (such as extending cooking time reprocessing, reworking, withdrawing food) based on standard procedures</p> <p>3.8. According to standard procedures, knows about the verification procedures</p> <p>3.9. Document and keep records according to standard procedures</p> <p>3.10. Responding quickly and take safety precautions for different hazardous situations</p> <p>3.11. Providing leadership in a variety of situations.</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p>

	4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources should be provided: 5.1 Tools, equipment and facilities appropriate to the process or activity. 5.2 Materials relevant to the proposed activity.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

#### **Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.