COMPETENCY STANDARDS

HALAL SEAWEEDS PROCESSING (NOODLES AND CHIPS) LEVEL II

PROCESSED FOOD AND BEVERAGES SECTOR

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
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PROCESSED FOOD AND BEVERAGES SECTOR
HALAL SEAWEEDS PROCESSING (NOODLES AND CHIPS) LEVEL II

COMPETENCY STANDARDS FOR
HALAL SEAWEEDS PROCESSING (NOODLES AND CHIPS) LEVEL II

SECTION 1 DEFINITION

The **HALAL SEAWEEDS PROCESSING (NOODLES AND CHIPS) LEVEL II** consists of competencies that a person must achieve to perform halal pre-seaweed processing activities, produce halal seaweed-based product (noodles and chips) and perform halal post-seaweed processing activities and market halal seaweed-based product.

The units of competency comprising this qualification include the following:

Unit Code	BASIC COMPETENCIES
400311210	Participate in workplace communication
400311211	Work in team environment
400311212	Solve/address general workplace problems
400311213	Develop career and life decisions
400311214	Contribute to workplace innovation
400311215	Present relevant information
400311216	Practice occupational safety and health policies and procedures
400311217	Exercise efficient and effective sustainable practices in the workplace
400311218	Practice entrepreneurial skills in the workplace

Unit Code	COMMON COMPETENCIES
PFB751210	Apply food safety and sanitation
PFB751211	Use standard measuring devices/instruments
PFB741213	Perform mathematical computations
PFB741214	Implement good manufacturing practice procedure
PFB741215	Implement environmental policies and procedures

Unit Code	CORE COMPETENCIES
AB-190700200-PFB751301	Perform halal pre-seaweed processing activities
AB-190700200-PFB751302	Produce halal seaweed-based product (noodles and chips)
AB-190700200-PFB751303	Perform halal post-seaweed processing activities
AB-190700200-PFB751304	Market halal seaweed-based product

A person who has achieved this qualification is competent to be:

- Halal seaweed processing worker
- Halal seaweed processor
- Halal seaweed-based product (noodles and/or chips) entrepreneur
- Halal seaweed noodles producer
- Halal seaweed chips producer

SECTION 2   COMPETENCY STANDARD

This section gives the details of the contents of the units of competency required in **HALAL SEAWEEDS PROCESSING (NOODLES AND CHIPS) LEVEL II.**

BASIC COMPETENCIES

UNIT OF COMPETENCY   :   **PARTICIPATE IN WORKPLACE COMMUNICATION**

UNIT CODE   :   **400311210**

UNIT DESCRIPTOR   :   This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Obtain and convey workplace information	1.1 Specific and relevant information is accessed from *appropriate sources* 1.2 Effective questioning, active listening and speaking skills are used to gather and convey information. 1.3 Appropriate *medium* is used to transfer information and ideas. 1.4 Appropriate non- verbal communication is used 1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed 1.6 Defined workplace procedures for the location and *storage* of information are used 1.7 Personal interaction is carried out clearly and concisely	1.1 Effective verbal and nonverbal communication 1.2 Different modes of communication 1.3 Medium of communication in the workplace 1.4 Organizational policies 1.5 Communication procedures and systems 1.6 Lines of Communication 1.7 Technology relevant to the enterprise and the individual's work responsibilities 1.8 Workplace etiquette	1.1 Effective verbal and nonverbal communication 1.2 Different modes of communication 1.3 Medium of communication in the workplace 1.4 Organizational policies 1.5 Communication procedures and systems 1.6 Lines of Communication 1.7 Technology relevant to the enterprise and the individual's workplace responsibilities etiquette
2. Perform duties following workplace instructions	2.1 Written notices and instructions are read and interpreted in accordance with organizational guidelines 2.2 Routine written instruction are followed	2.1 Effective verbal and non-verbal communication 2.2 Different modes of communication 2.3 Medium of	2.1 Following simple spoken instructions 2.2 Performing routine workplace duties following simple written

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	based on established procedures 2.3 Feedback is given to workplace supervisor based instructions/ information received 2.4 ***Workplace interactions*** are conducted in a courteous manner 2.5 Where necessary, clarifications about routine workplace procedures and matters concerning conditions of employment are sought and asked from ***appropriate sources*** 2.6 Meetings outcomes are interpreted and implemented	communication in the workplace 2.4 Organizational/ Workplace policies 2.5 Communication procedures and systems 2.6 Lines of communication 2.7 Technology relevant to the enterprise and the individual's work responsibilities 2.8 Effective questioning techniques (clarifying and probing) 2.9 Workplace etiquette	notices 2.3 Participating in workplace meetings and discussions 2.4 Completing work-related documents 2.5 Estimating, calculating and recording routine workplace measures 2.6 Relating/ Responding to people of various levels in the workplace 2.7 Gathering and providing information in response to workplace requirements 2.8 Basic questioning/quer ying 2.9 Skills in reading for information 2.10 Skills in locating
3. Complete relevant work-related documents	3.1 Range of ***forms*** relating to conditions of employment are completed accurately and legibly 3.2 Workplace data is recorded on standard workplace forms and documents 3.3 Errors in recording information on forms/ documents are identified and acted upon 3.3 Reporting requirements to supervisor are completed according to organizational guidelines	3.1 Effective verbal and non-verbal communication 3.2 Different modes of communication 3.3 Workplace forms and documents 3.4 Organizational/ Workplace policies 3.5 Communication procedures and systems 3.6 Technology relevant to the enterprise and the individual's work responsibilities	3.1 Completing work- related documents 3.2 Applying operations of addition, subtraction, division and multiplication 3.3 Gathering and providing information in response to workplace requirements 3.4 Effective record keeping skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Appropriate sources	May include but not limited to: 1.1 Team members 1.2 Supervisor/Department Head 1.3 Suppliers 1.4 Trade personnel 1.5 Local government 1.6 Industry bodies
2. Medium	May include but not limited to: 2.1 Memorandum 2.2 Circular 2.3 Notice 2.4 Information dissemination 2.5 Follow-up or verbal instructions 2.6 Face-to-face communication 2.7 Electronic media (secondary storage device e.g hard drive, cyberspace)
3. Storage	May include but not limited to: 3.1 Manual filing system 3.2 Computer-based filing system
4. Workplace interactions	May include but not limited to: 4.1 Face-to-face 4.2 Telephone 4.3 Electronic and two-way radio 4.4 Written including electronic means, memos, instruction and forms 4.5 Non-verbal including gestures, signals, signs and diagrams
5. Forms	May include but not limited to: 5.1. HR/Personnel forms, telephone message forms, safety reports

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Prepared written communication following standard format of the organization 1.2 Accessed information using workplace communication equipment/systems 1.3 Made use of relevant terms as an aid to transfer information effectively 1.4 Conveyed information effectively adopting formal or informal communication
2. Resource Implications	The following resources should be provided: 2.1. Fax machine 2.2. Telephone 2.3. Notebook 2.4. Writing materials 2.5. Computer with Internet connection
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Demonstration with oral questioning 3.2 Interview 3.3 Written test 3.4 Third-party report
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or through an accredited institution

UNIT OF COMPETENCY : WORK IN A TEAM ENVIRONMENT

UNIT CODE   : 400311211

UNIT DESCRIPTOR   : This unit covers the skills, knowledge and attitudes to identify one's roles and responsibilities as a member of a team.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Describe team role and scope	1.1 The *role and objective of the team* is identified from available *sources of information* 1.2 Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources	1.1 Group structure 1.2 Group development 1.3 Sources of information	1.1 Communicating with others, appropriately consistent with the culture of the workplace 1.2 Developing ways in improving work structure and performing respective roles in the group or organization

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Identify one's role and responsibility within a team	2.1 Individual roles and responsibilities within the team environment are identified 2.2 Roles and objectives of the team is identified from available *sources of information* 2.3 Team parameters, reporting relationships and responsibilities are identified based on team discussions and appropriate external sources	2.1 Team roles and objectives 2.2 Team structure and parameters 2.3 Team development 2.4 Sources of information	2.1 Team roles and objectives 2.2 Team structure and parameters 2.3 Team development 2.4 Sources of information Instructional planning and delivery skills 2.5 Monitoring and evaluation skills 2.6 Mentoring and coaching skills
3. Work as a team member	3.1 Effective and appropriate forms of communications are used and interactions undertaken with team members based on company practices. 3.2 Effective and appropriate contributions made to complement team activities and objectives, based on workplace context 3.3 Protocols in reporting are observed based on standard company practices. 3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives	3.1 Types and levels of learning evaluation 3.2 Learning styles and strategies 3.3 Training and development approaches 3.4 Communication Process 3.5 Workplace communication protocol 3.6 Team planning and decision making 3.7 Team thinking 3.8 Team roles 3.9 Process of team development 3.10 Workplace context	3.1 Communicating appropriately, consistent with the culture of the workplace 3.2 Interacting effectively with others 3.3 Deciding as an individual and as a group using group think strategies and techniques 3.4 Contributing to Resolution of issues and concerns

RANGE OF VARIABLES

VARIABLE	RANGE
1. Role and objective of team	May include but not limited to: 1.1 Work activities in a team environment with enterprise or specific sector 1.2 Limited discretion, initiative and judgment maybe demonstrated on the job, either individually or in a team environment
2. Sources of information	May include but not limited to: 2.1 Standard operating and/or other workplace procedures 2.2 Job procedures 2.3 Machine/equipment manufacturer's specifications and instructions 2.4 Organizational or external personnel 2.5 Client/supplier instructions 2.6 Quality standards 2.7 OHS and environmental standards
3. Workplace context	May include but not limited to: 3.1 Work procedures and practices 3.2 Conditions of work environments 3.3 Legislation and industrial agreements 3.4 Standard work practice including the storage, safe handling and disposal of chemicals 3.5 Safety, environmental, housekeeping and quality guidelines

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1. Worked in a team to complete workplace activity 1.2. Worked effectively with others 1.3. Conveyed information in written or oral form 1.4. Selected and used appropriate workplace language 1.5. Followed designated work plan for the job
2. Resource Implications	The following resources should be provided: 2.1. Access to relevant workplace or appropriately simulated environment where assessment can take place 2.2. Materials relevant to the proposed activity or tasks
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1. Role play involving the participation of individual member to the attainment of organizational goal 3.2. Case studies and scenarios as a basis for discussion of issues and strategies in teamwork 3.3. Socio-drama and socio-metric methods 3.4. Sensitivity techniques 3.5. Written Test
4. Context for Assessment	4.1. Competency may be assessed in workplace or in a simulated workplace setting 4.2. Assessment shall be observed while task are being undertaken whether individually or in group

UNIT OF COMPETENCY   :   **SOLVE/ADDRESS GENERAL WORKPLACE PROBLEMS**

UNIT CODE   :   **400311212**

UNIT DESCRIPTOR   :   This unit covers the knowledge, skills and attitudes required to apply problem-solving techniques to determine the origin of problems and plan for their resolution. It also includes addressing procedural problems through documentation, and referral.

ELEMENTS	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify routine problems	1.1 Routine **problems or procedural problem** areas are identified 1.2 Problems to be investigated are defined and determined 1.3 Current conditions of the problem are identified and documented	1.1 Current industry hardware and software products and services 1.2 Industry maintenance, service and helpdesk practices, processes and procedures 1.3 Industry standard diagnostic tools 1.4 Malfunctions and resolutions	1.1 Identifying current industry hardware and software products and services 1.2 Identifying current industry maintenance, services and help desk practices, processes and procedures. 1.3 Identifying current industry standard diagnostic tools 1.4 Describing common malfunctions and resolutions. 1.5 Determining the root cause of a routine malfunction
2. Foster the habit of critical inquiry and curiosity in the workplace.	2.1 Issues and situations are reflected on and wondered about. 2.2 Issues and problems in the workplace particularly in the policies, procedures and protocols are discussed	2.1 Different methods of critical and appreciative inquiry and their relevance to different situations.	2.1 Using range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of information).

	and evaluated between and among teams. 2.3 Evaluation of efficiency and effectiveness of workplace policies, procedures and protocols are documented, communicated and agreed upon between and among teams. 2.4 Growth mindset and positive relationship and communication is applied in the context of ***curiosity and critical inquiry*** in the workplace.	2.2 Techniques to assist in forming the habit of asking questions and taking responsibility for answers. 2.3 Why questions are important and the benefits of asking good questions for individuals, businesses and communities (the importance of critical thinking). 2.4 Growth mindset and positive communication and relationship strategies and techniques.	2.2 Communicating to actively listen and to ask questions of others in a constructive way. 2.3 Using critical thinking pathway to formulate and ask relevant questions and come up with appropriate answers. 2.4 Performing assimilation and accommodation skills to interpret and distil key information of relevance to a given situation. 2.5 Assessing and measuring the extent of effectiveness and efficiency of the systems, processes and procedures in the workplace. 2.6 Communicating insights on workplace effectiveness and efficiency.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Problems/Procedural Problem	May include but not limited to: 1.1 Routine/non – routine processes and quality problems 1.2 Equipment selection, availability and failure 1.3 Teamwork and work allocation problem 1.4 Safety and emergency situations and incidents 1.5 Work-related problems outside of own work area
2. Appropriate person	May include but not limited to: 2.1 Supervisor or manager 2.2 Peers/work colleagues 2.3 Other members of the organization
3. Document	May include but not limited to: 3.1 Electronic mail 3.2 Briefing notes 3.3 Written report 3.4 Evaluation report
4. Plan	May include but not limited to: 4.1 Priority requirements 4.2 Co-ordination and feedback requirements 4.3 Safety requirements 4.4 Risk assessment 4.5 Environmental requirements

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Determined the root cause of a routine problem 1.2 Identified solutions to procedural problems. 1.3 Produced documentation that recommends solutions to problems. 1.4 Followed established procedures. 1.5 Referred unresolved problems to support persons.
2. Resource Implications	2.1. Assessment will require access to a workplace over an extended period, or a suitable method of gathering evidence of operating ability over a range of situations.
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Case Formulation 3.2 Life Narrative Inquiry 3.3 Standardized test The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : DEVELOP CAREER AND LIFE DECISIONS

UNIT CODE : 400311213

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitudes in managing one's emotions, developing reflective practice, and boosting self-confidence and developing self-regulation.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Manage one's emotion	1.1 **Self-management strategies** are identified 1.2 Skills to work independently and to show initiative, to be conscientious, and persevering in the face of setbacks and frustrations are developed. 1.3 Techniques for effectively handling negative emotions and **unpleasant situation i**n the workplace are examined.	1.1 Self-management strategies that assist in regulating behavior and achieving personal and learning goals (e.g. Nine self-management strategies according to Robert Kelley) 1.2 Enablers and barriers in achieving personal and career goals 1.3 Techniques in handling negative emotions and unpleasant situations in the workplace such as frustration, anger, worry, anxiety, etc.	1.1 Managing properly one's emotions and recognizing situations that cannot be changed and accept them and remain professional 1.2 Developing self-discipline, working independently and showing initiative to achieve personal and career goal 1.3 Showing confidence, and resilience in the face of setbacks and frustrations and other negative emotions and unpleasant situations in the workplace

2. Develop reflective practice	2.1 Personal strengths and achievements, based on self-assessment strategies and teacher feedback are contemplated 2.2 Progress when seeking and responding to feedback from teachers to assist them in consolidating strengths, addressing weaknesses and fulfilling their potential are monitored 2.3 Outcomes of personal and academic challenges by reflecting on previous problem solving and decision-making strategies and feedback from peers and teachers are predicted.	2.1 Basic SWOT analysis 2.2 Strategies to improve one's attitude in the workplace 2.3 Gibbs' Reflective Cycle/Model (Description, Feelings, Evaluation, Analysis, Conclusion, and Action plan)	2.1 Using the basic SWOT analysis as self-assessment strategy 2.2 Developing reflective practice through realization of limitations, likes/ dislikes; through showing of self-confidence 2.3 Demonstrating self-acceptance and being able to accept challenges
3. Boost self-confidence and develop self-regulation	3.1 Efforts for continuous self-improvement are demonstrated. 3.2 Counter-productive tendencies at work are eliminated. 3.3 Positive outlook in life are maintained.	3.1 Four components of self-regulation based on Self-Regulation Theory (SRT) 3.2 Personality development concepts 3.3 Self-help concepts (e. g., 7 Habits by Stephen Covey, transactional analysis, psycho-spiritual concepts)	3.1 Performing effective communication skills – reading, writing, conversing skills 3.2 Showing affective skills – flexibility, adaptability, etc. 3.3 Self-assessment for determining one's strengths and weaknesses

RANGE OF VARIABLES

VARIABLE	RANGE
1. Self-management strategies	May include but not limited to: 1.1 Seeking assistance in the form of job coaching or mentoring 1.2 Continuing dialogue to tackle workplace grievances 1.3 Collective negotiation/bargaining for better working conditions 1.4 Share your goals to improve with a trusted co-worker or supervisor 1.5 Make a negativity log of every instance when you catch yourself complaining to others 1.6 Make lists and schedules for necessary activities
2. Unpleasant situation	May include but not limited to: 2.1 Job burn-out 2.2 Drug dependence 2.3 Sulking

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Express emotions appropriately 1.2 Work independently and show initiative 1.3 Consistently demonstrate self-confidence and self-discipline
2. Resource Implications	The following resources should be provided: 2.1. Access to workplace and resource s 2.2. Case studies
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1. Demonstration or simulation with oral questioning 3.2. Case problems involving work improvement and sustainability issues 3.3. Third-party report
4. Context for Assessment	4.1. Competency assessment may occur in workplace or any appropriately simulated environment

UNIT OF COMPETENCY : **CONTRIBUTE TO WORKPLACE INNOVATION**

UNIT CODE : **400311214**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to make a pro-active and positive contribution to workplace innovation.

ELEMENTS	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify opportunities to do things better	1.1 *Opportunities for improvement* are identified proactively in their own area of work. 1.2 *Information* is gathered and reviewed which may be relevant to ideas and which might assist in gaining support for idea.	1.1 Roles of individuals in suggesting and making improvements. 1.2 Positive impacts and challenges in innovation. 1.3 Types of changes and responsibility. 1.4 Seven habits of highly effective people.	1.1 Identifying opportunities to improve and to do things better. Involvement. 1.2 Identifying the positive impacts and the challenges of change and innovation. 1.3 Identifying examples of the types of changes that are within and outside own scope of responsibility
2. Discuss and develop ideas with others	2.1 *People who could provide input* to ideas for improvements are identified. 2.2 Ways of approaching people to begin sharing ideas are selected. 2.3 Meeting is set with relevant people. 2.4 Ideas for follow up are review and selected based on feedback. 2.5 *Critical inquiry method* is used to discuss and develop ideas with others.	2.1 Roles of individuals in suggesting and making improvements. 2.2 Positive impacts and challenges in innovation. 2.3 Types of changes and responsibility. 2.4 Seven habits of highly effective people.	2.1 Identifying opportunities to improve and to do things better. Involvement. 2.2 Identifying the positive impacts and the challenges of change and innovation. 2.3 Providing examples of the types of changes that are within and outside own scope of responsibility 2.4 Communicatin g ideas for

ELEMENTS	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
			change through small group discussions and meetings.

ELEMENTS	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Integrate ideas for change in the workplace.	3.1 Critical inquiry method is used to integrate different ideas for change of key people. 3.2 Summarizing, analyzing and generalizing skills are used to extract salient points in the pool of ideas. 3.3 *Reporting skills* are likewise used to communicate results. 3.4 *Current Issues and concerns* on the systems, processes and procedures, as well as the need for simple innovative practices are identified.	3.1 Roles of individuals in suggesting and making improvements 3.2 Positive impacts and challenges in innovation 3.3 Types of changes and responsibility 3.4 Seven habits of highly effective people 3.5 Basic research skills	3.1 Identifying opportunities to improve and to do things better 3.2 Identifying the positive impacts and the challenges of change and innovation 3.3 Providing examples of the types of changes that are within and outside own scope of responsibility 3.4 Communicating ideas for change through small group discussions and meetings 3.5 Demonstrating skills in analysis and interpretation of data

RANGE OF VARIABLES

VARIABLE	RANGE
1. Opportunities for improvement	May include but not limited to: 1.1 Systems. 1.2 Processes. 1.3 Procedures. 1.4 Protocols. 1.5 Codes. 1.6 Practices.
2. Information	May include but not limited to: 2.1 Workplace communication problems. 2.2 Performance evaluation results. 2.3 Team dynamics issues and concerns. 2.4 Challenges on return of investment 2.5 New tools, processes and procedures. 2.6 New people in the organization.
3. People who could provide input	May include but not limited to: 3.1 Leaders. 3.2 Managers. 3.3 Specialists. 3.4 Associates. 3.5 Researchers. 3.6 Supervisors. 3.7 Staff. 3.8 Consultants (external) 3.9 People outside the organization in the same field or similar expertise/industry. 3.10 Clients
4. Critical inquiry method	May include but not limited to: 4.1 Preparation. 4.2 Discussion. 4.3 Clarification of goals. 4.4 Negotiate towards a Win-Win outcome. 4.5 Agreement. 4.6 Implementation of a course of action. 4.7 Effective verbal communication. See our pages: Verbal Communication and Effective Speaking. 4.8 Listening. 4.9 Reducing misunderstandings is a key part of effective negotiation. 4.10 Rapport Building. 4.11 Problem Solving. 4.12 Decision Making. 4.13 Assertiveness. 4.14 Dealing with Difficult Situations.

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Demonstrated ability and attitude to keep oneself updated of relevant issues/trends 1.2 Demonstrated ability to think and act based on one's principles and values 1.3 Demonstrated a holistic/global outlook on internal and external events in the workplace
2. Resource Implications	The following resources should be provided: 2.1 Access to workplace and resources 2.2 Case studies
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Demonstration or simulation with oral questioning 3.2 Case problems involving global and local issues 3.3 Third-party report
4. Context for Assessment	4.1 Competency assessment may occur in workplace or any appropriately simulated environment

UNIT OF COMPETENCY : **PRESENT RELEVANT INFORMATION**

UNIT CODE : **400311215**

UNIT DESCRIPTOR : This unit of covers the knowledge, skills and attitudes required to present data/information appropriately

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Gather data/ information	1.1 Evidence, facts and information are collected. 1.2 Evaluation, terms of reference and conditions are reviewed to determine whether data/information falls within project scope.	1.1 Organizational protocols 1.2 Confidentiality 1.3 Accuracy 1.4 Business mathematics and statistics 1.5 Data analysis techniques/procedures 1.6 Reporting requirements to a range of audiences 1.7 Legislation, policy and procedures relating to the conduct of evaluations 1.8 Organizational values, ethics and codes of conduct	1.1 Describing organizational protocols relating to client liaison 1.2 Protecting confidentiality 1.3 Describing accuracy 1.4 Computing business mathematics and statistics 1.5 Describing data analysis techniques/ procedures 1.6 Reporting requirements to a range of audiences 1.7 Stating legislation, policy and procedures relating to the conduct of evaluations 1.8 Stating organizational values, ethics and codes of conduct

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Assess gathered data/ information	2.1 Validity of data/ information is assessed. 2.2 Analysis techniques are applied to assess data/ information. 2.3 Trends and anomalies are identified. 2.4 *Data analysis techniques* and procedures are documented. 2.5 Recommendations are made on areas of possible improvement.	2.1 Business Mathematics and statistics 2.2 Data analysis techniques/ procedures 2.3 Reporting requirements to a range of audiences 2.4 Legislation, policy and procedures relating to the conduct of evaluations 2.5 Organizational values, ethics and codes of conduct	2.1 Computing business mathematics and statistics 2.2 Describing data analysis techniques/ procedures 2.3 Reporting requirements to a range of audience 2.4 Stating legislation, policy and procedures relating to the conduct of evaluations 2.5 Stating organizational values, ethics and codes of conduct
3. Record and present information	3.1 Studied data/information are recorded. 3.2 Recommendations are analyzed for action to ensure they are compatible with the project's scope and terms of reference. 3.3 Interim and final reports are analyzed and outcomes are compared to the criteria established at the outset. 3.4 Findings are presented to stakeholders.	3.1 Data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Legislation, policy and procedures relating to the conduct of evaluations 3.4 Organizational values, ethics and codes of conduct	3.1 Describing data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Stating legislation, policy and procedures relating to the conduct of evaluations 3.4 Stating organizational values, ethics and codes of conduct practices

RANGE OF VARIABLES

VARIABLE	RANGE

1. Data analysis techniques	May include but not limited to:
	  1.1. Domain analysis
	  1.2. Content analysis
	  1.3. Comparison technique

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate:
	  1.1 Determine data / information
	  1.2 Studied and applied gathered data/information
	  1.3 Recorded and studied data/information
	
	These aspects may be best assessed using a range of scenarios as a stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.

2. Resource Implications	Specific resources for assessment 2.1. Evidence of competent performance should be obtained by observing an individual in an information management role within the workplace or operational or simulated environment.

3. Methods of Assessment	Competency in this unit may be assessed through:
	  3.1. Written Test
	  3.2. Interview
	  3.3. Portfolio
	
	The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency.
	Simulation should be based on the actual workplace and will include walk-throughs of the relevant competency components.

4. Context for Assessment	4.1. In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

UNIT OF COMPETENCY : **PRACTICE OCCUPATIONAL SAFETY AND HEALTH POLICIES AND PROCEDURES**

UNIT CODE : **400311216**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to identify OSH compliance requirements, prepare OSH requirements for compliance, perform tasks in accordance with relevant OSH policies and procedures.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify OSH compliance requirements	1.1 Relevant *OSH requirements, regulations, policies and procedures* are identified in accordance with workplace policies and procedures. 1.2 OSH activity non-conformities are conveyed to *appropriate personnel.* 1.3 *OSH preventive and control requirements* are identified in accordance with OSH work policies and procedures.	1.1 OSH preventive and control requirements 1.2 Hierarchy of Controls 1.3 Hazard 1.4 Prevention and Control 1.5 General OSH principles 1.6 Work standards and procedures 1.7 Safe handling procedures of tools, equipment and materials 1.8 Standard 1.9 Emergency plan and procedures in the workplace	1.1 Communication skills 1.2 Interpersonal skills 1.3 Critical thinking skills 1.4 Observation skills
2. Prepare OSH requirements for compliance	2.1 OSH work activity material, tools and equipment requirements are identified in accordance with workplace policies and procedures. 2.2 Required OSH materials, tools and equipment are acquired in accordance with workplace policies and procedures. 2.3 Required OSH materials, tools and equipment are arranged/ placed in accordance with OSH work standards.	2.1 Resources necessary to execute hierarchy of controls 2.2 General OSH principle 2.3 Work standards and procedures 2.4 Safe handling procedures of tools, equipment and materials 2.5 Different OSH control measures	2.1 Communication skills 2.2 Estimation skills 2.3 Interpersonal skills 2.4 Critical thinking skills 2.5 Observation skills 2.6 Material, tool and equipment identification skills

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Perform tasks in accordance with relevant OSH policies and procedures	3.1 Relevant OSH work procedures are identified in accordance with workplace policies and procedures 3.2 Work Activities are executed in accordance with OSH work standards 2.4 ***Non-compliance work activities*** are reported to *appropriate personnel*	3.1 OSH work standards 3.2 Industry related work activities 3.3 General OSH principles 2.6 OSH Violations Non-compliance work activities	3.1 Communication skills 3.2 Interpersonal skills 3.3 Troubleshooting skills 3.4 Critical thinking skills 2.7 Observation skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. OSH Requirements, Regulations, Policies and Procedures	May include but not limited to: 1.1 Clean Air Act 1.2 Building code 1.3 National Electrical and Fire Safety Codes 1.4 Waste management statutes and rules 1.5 Permit to Operate 1.6 Philippine Occupational Safety and Health Standards 1.7 Department Order No. 13 (Construction Safety and Health) 1.8 ECC regulations
2. Appropriate Personnel	May include but not limited to: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself
3. OSH Preventive and Control Requirements	May include but not limited to: 3.1 Resources needed for removing hazard effectively 3.2 Resources needed for substitution or replacement 3.3 Resources needed to establishing engineering controls 3.4 Resources needed for enforcing administrative controls 3.5 Personal Protective equipment
4. Non OSH-Compliance Work Activities	May include non-compliance or observance of the following safety measures: 4.1 Violations that may lead to serious physical harm or death 4.2 Fall Protection 4.3 Hazard Communication 4.4 Respiratory Protection 4.5 Power Industrial Trucks 4.6 Lockout/Tag-out 4.7 Working at heights (use of ladder, scaffolding) 4.8 Electrical Wiring Methods 4.9 Machine Guarding 4.10 Electrical General Requirements 4.11 Asbestos work requirements 4.12 Excavations work requirements

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate:
	1.1. Convey OSH work non-conformities to appropriate personnel
	1.2. Identify OSH preventive and control requirements in accordance with OSH work policies and procedures
	1.3. Identify OSH work activity material, tools and equipment requirements in accordance with workplace policies and procedures
	1.4. Arrange/Place required OSH materials, tools and equipment in accordance with OSH work standards
	1.5. Execute work activities in accordance with OSH work standards
	1.6. Report OSH activity non-compliance work activities to appropriate personnel
2. Resource Implications	The following resources should be provided:
	2.1 Facilities, materials tools and equipment necessary for the activity
3. Methods of Assessment	Competency in this unit may be assessed through:
	3.1 Observation/Demonstration with oral questioning
	3.2 Third party report
4. Context for Assessment	4.1 Competency may be assessed in the workplace or in a simulated workplace setting

UNIT OF COMPETENCY : EXERCISE EFFICIENT AND EFFECTIVE SUSTAINABLE PRACTICES IN THE WORKPLACE

UNIT CODE : **400311217**

UNIT DESCRIPTOR : This unit covers knowledge, skills and attitude to identify the efficiency and effectiveness of resource utilization, determine causes of inefficiency and/or ineffectiveness of resource utilization and convey inefficient and ineffective environmental practices.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify the efficiency and effectiveness of resource utilization	1.1 Required resource utilization in the workplace is measured using appropriate techniques. 1.2 Data are recorded in accordance with workplace protocol. 1.3 Recorded data are compared to determine the efficiency and effectiveness of resource utilization according to established ***environmental work procedures.***	1.1 Importance of Environmental Literacy 1.2 Environmental Work Procedure 1.3 Waste Minimization 1.4 Efficient Energy Consumptions	1.1 Recording Skills 1.2 Writing Skills 1.3 Innovation Skills

ELEMENT	PERFORMANCE CRITERIA	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Determine causes of inefficiency and/or ineffectiveness of resource utilization	2.1 Potential causes of inefficiency and/or ineffectiveness are listed. 2.2 Causes of inefficiency and/or ineffectiveness are identified through deductive reasoning. 2.3 Identified causes of inefficiency and/or ineffectiveness are validated thru established environmental procedures.	2.1 Causes of environmental inefficiencies and ineffectiveness	2.1 Deductive 2.2 Reasoning Skills 2.3 Critical thinking 2.4 Problem Solving 2.5 Observation Skills

3. Convey inefficient and ineffective environmental practices	3.1 Efficiency and effectiveness of resource utilization are reported to *appropriate personnel.* 3.2 Concerns related resource utilization are discussed with appropriate personnel. 3.3 Feedback on information/ concerns raised are clarified with appropriate personnel.	3.1 Appropriate Personnel to address the environmental hazards 3.2 Environmental corrective actions	3.1 Written and Oral Communication Skills 3.2 Critical thinking 3.3 Problem Solving 3.4 Observation Skills 3.5 Practice 3.6 Environmental Awareness

RANGE OF VARIABLES

VARIABLE	RANGE
1. Environmental Work Procedures	May include but not limited to: 1.1 Utilization of Energy, Water, Fuel Procedures 1.2 Waster Segregation Procedures 1.3 Waste Disposal and Reuse Procedures 1.4 Waste Collection Procedures 1.5 Usage of Hazardous Materials Procedures 1.6 Chemical Application Procedures 1.7 Labeling Procedures
2. Appropriate Personnel	May include but not limited to: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1. Measured required resource utilization in the workplace using appropriate techniques 1.2. Recorded data in accordance with workplace protocol 1.3. Identified causes of inefficiency and/or ineffectiveness through deductive reasoning 1.4. Validate the identified causes of inefficiency and/or ineffectiveness thru established environmental procedures 1.5. Report efficiency and effectives of resource utilization to appropriate personnel 1.6. Clarify feedback on information/concerns raised with appropriate personnel
2. Resource Implications	The following resources should be provided: 2.1 Workplace 2.2 Tools, materials and equipment relevant to the tasks 2.3 PPE 2.4 Manuals and references
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Demonstration 3.2 Oral questioning 3.3 Written examination
4. Context for Assessment	4.1 Competency assessment may occur in workplace or any appropriately simulated environment 4.2 Assessment shall be observed while task are being undertaken whether individually or in-group

UNIT OF COMPETENCY : PRACTICE ENTREPRENEURIAL SKILLS IN THE WORKPLACE

UNIT CODE : 400311218

UNIT DESCRIPTOR : This unit covers the outcomes required to apply entrepreneurial workplace best practices and implement cost-effective operations.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Apply entrepreneurial workplace best practices	1.1 **Good practices** relating to workplace operations are observed and selected following workplace policy. 1.2 Quality procedures and practices are complied with according to workplace requirements. 1.3 Cost-conscious habits in **resource utilization** are applied based on industry standards.	1.1 Workplace best practices, policies and criteria 1.2 Resource utilization 1.3 Ways in fostering entrepreneurial attitudes: 1.3.1 Patience 1.3.2 Honesty 1.3.3 Quality-consciousness 1.3.4 Safety-consciousness 1.3.5 Resourcefulness	1.1 Communication skills 1.2 Complying with quality procedures
2. Communicate entrepreneurial workplace best practices	2.1 Observed good practices relating to workplace operations are communicated to **appropriate person**. 2.2 Observed quality procedures and practices are communicated to appropriate person. 2.3 Cost-conscious habits in resource utilization are communicated based on industry standards.	2.1 Workplace best practices, policies and criteria 2.2 Resource utilization 2.3 Ways in fostering entrepreneurial attitudes: 2.3.1 Patience 2.3.2 Honesty 2.3.3 Quality-consciousness 2.3.4 Safety-consciousness 2.3.5 Resourcefulness	2.1 Communication skills 2.2 Complying with quality procedures 2.3 Following workplace communication protocol
3. Implement cost effective operations	3.1 Preservation and optimization of workplace resources is implemented in accordance with enterprise policy. 3.2 Judicious use of workplace tools,	3.1 Optimization of workplace resources 3.2 5S procedures and concepts 3.3 Criteria for cost-effectiveness	3.1 Implementing preservation and optimizing workplace resources 3.2 Observing judicious use of workplace tools,

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	equipment and materials are observed according to manual and work requirements. 3.3 Constructive contributions to office operations are made according to enterprise requirements. 3.4 Ability to work within one's allotted time and finances is sustained.	3.4 Workplace Productivity 3.5 Impact of entrepreneurial mindset to workplace productivity 3.6 Ways in fostering entrepreneurial attitudes: 3.6.1 Quality-consciousness 3.6.2 Safety-consciousness	equipment and materials 3.3 Making constructive contributions to office operations 3.4 Sustaining ability to work within allotted time and finances

RANGE OF VARIABLES

VARIABLE	RANGE
1.Good practices	May include but not limited to: 1.1 Economy in use of resources 1.2 Documentation of quality practices
2.Resources utilization	May include but not limited to: 2.1 Consumption/ use of consumables 2.2 Use/Maintenance of assigned equipment and furniture 2.3 Optimum use of allotted /available time

EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Demonstrated ability to identify and sustain cost-effective activities in the workplace 1.2 Demonstrated ability to practice entrepreneurial knowledge, skills and attitudes in the workplace.

2. Resource Implications	The following resources should be provided:
	2.1 Simulated or actual workplace
	2.2 Tools, materials and supplies needed to demonstrate the required tasks
	2.3 References and manuals
	    2.3.1 Enterprise procedures manuals
	    2.3.2 Company quality policy

3. Methods of Assessment	Competency in this unit should be assessed through: 3.1 Interview 3.2 Third-party report
4.Context of Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group

COMMON COMPETENCIES

UNIT OF COMPETENCY : **APPLY FOOD SAFETY AND SANITATION**

UNIT CODE : **PFB751210**

UNIT DESCRIPTOR : This unit covers skills and attitude required to apply food safety and sanitation in the workplace

ELEMENT	PERFORMANCE CRITERIA *Italicized* terms are elaborated in the Range of Variable	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Wear Personal Protective Equipment	1.1 Personal protective equipment are checked according to **manufacturer's specifications**. 1.2 **Personal protective equipment (PPE)** are worn according to the job requirement.	1.1 Personal protective equipment (PPE) 1.2 Procedures in wearing in PPE 1.3 Good Food Manufacturing Practices 1.4 Parts and functions of personal protective equipment	1.1 Checking PPE 1.2 Practicing GMP
2. Observe Personal Hygiene and Good Grooming	2.1 Personal hygiene and good grooming is practiced in line with **workplace health and safety requirements.**	2.1 Good grooming and personal hygiene 2.2 Workplace health and safety requirements	2.1 Practicing good grooming and personal hygiene practices
3. Implement Food and Sanitation Practices	3.1 Sanitary food handling practices are implemented in line with workplace sanitation. 3.2 Safety measures are observed in line with workplace safety practices. 3.3 Performance of operation or quality of product of service to ensure customer satisfaction is monitored.	3.1 Proper waste disposal 3.2 Environmental protection and concerns 3.3 Food safety principles and practices 3.4 TQM and other food quality system principles	3.5 Managing wastes 3.6 Implementing sanitary food handling practices 3.7 Practicing workplace safety

ELEMENT	PERFORMANCE CRITERIA *Italicized* terms are elaborated in the Range of Variable	REQUIRED KNOWLEDGE	REQUIRED SKILLS
4. Render safety Measures and First Aid Procedures	4.1 *Safety measures* are applied according to workplace rules and regulations. 4.2 *First aid procedures* are applied and coordinated with concerned personnel according to workplace standard operating procedures.	4.1 Safety measures 4.2 First aid procedures 4.3 Parts and functions of personal protective equipment 4.4 First Aid Kit	4.1 Applying safety measures 4.2 Applying first aid treatment 4.3 Practicing PPE 4.4 Coordinating with concerned personnel
5. Implement housekeeping activities	5.1 Work area and surroundings are cleaned in accordance with workplace health and safety regulations. 5.2 Waste is disposed according to organization's waste disposal system. 5.3 *Hazards* in the work area are recognized and reported to designated personnel according to workplace procedures.	5.1 Hazards in work area 5.2 Waste disposal 5.3 Housekeeping / 7s 5.4 Proper waste disposal	5.1 Implementing housekeeping activities 5.2 Practicing proper waste disposal 5.3 Coordination skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Manufacturer's Specifications	May include but not limited to: 1.1 Handling 1.2 Operating 1.3 Discharge Label 1.4 Reporting 1.5 Testing 1.6 Positioning 1.7 Refilling
2. Personal Protective Equipment	May include but not limited to: 2.1 Apron/laboratory gown 2.2 Mouth masks 2.3 Gloves 2.4 Rubber boots/safety shoes 2.5 Head gears such as caps, hair nets, earl plug
3. Workplace Health and Safety Requirements	May include but not limited to: 3.1 Health/Medical Certificate 3.2 DOLE requirements 3.3 BFAD requirements 3.4 Personal Hygiene and good grooming 3.5 Plant Sanitation and waste management
4. Safety Measures	May include but not limited to: 4.1 Labeling of chemicals and other sanitizing agents 4.2 Installation of firefighting equipment in the work area 4.3 Installation of safety signage's and symbols 4.4 Implementation of 5S in the work area 4.5 Removal of combustible material in the work area
5. First Aid Procedures	May include but not limited to: 5.1 Mouth to mouth resuscitation 5.2 CPR 5.3 Application of tourniquet 5.4 Applying pressure to bleeding wounds or cuts 5.5 First aid treatment for burned victims
6. Hazards	May include but not limited to: 6.1 Physical 6.2 Biological 6.3 Chemical

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Cleaned, checked and sanitized personal protective equipment 1.2 Practiced proper personal hygiene and good grooming 1.3 Implemented workplace food safety practices 1.4 Applied first aid measures to victims 1.5 Implemented good housekeeping activities in the work area
2. Methods of Assessment	Competency may be assessed through: 2.1 A combination of direct observation and questioning of a candidate processing foods.
3. Resource Implications	The following resources should be provided: 3.1 Work area/station 3.2 First Aid kit 3.3 PPE relevant to the activities 3.4 Fire extinguisher 3.5 Stretcher 3.6 Materials, tools and equipment relevant to the unit of competency
4. Context of Assessment	Competency maybe assessed in actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY : **USE STANDARD MEASURING DEVICES AND INSTRUMENTS**

UNIT CODE : **PFB751211**

UNIT DESCRIPTOR : This unit covers skills and attitude required to use standard measuring devices, instruments in the workplace.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variable	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify Standard Measuring Devices and Instruments	1.1 ***Standard measuring devices and instruments*** are identified according to manufacturer's specifications. 1.2 Devices and instruments for measuring are properly checked, sanitized and calibrated prior to use.	1.1 Safe handling of measuring devices and instruments 1.2 Specifications and functions of measuring devices and instruments 1.3 Defects and breakages of measuring devices and instrument 1.4 Procedures in sanitizing and calibrating and stowing equipment and instruments	1.1 Communication skills 1.2 Sanitary handling of devices and instruments 1.3 Calibrating skills
2. Review the Procedures in Using Standard Measuring Devices and Instruments	2.1 Procedures in using the ***standard measuring devices*** and instruments are recalled according to manufacturer's specifications. 2.2 Printed procedures/ brochures/ catalogues are consulted according to specified ***food processing methods.***	2.1 Procedures in using different standard measuring devices 2.2 Different food processing methods	2.1 Reading and following printed manuals and brochures 2.2 Using standard measuring devices

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variable	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Follow Procedures of Using Measuring Devices and Instruments	3.1 Methods/practices of using measuring devices and instruments are strictly observed according to manufacturer's specifications and workplace requirements. 3.2 Measuring devices and instruments are cleaned, wiped dry and stowed after use to ensure conformity with workplace requirements.	3.1 Methods/ practice of using measuring devices and instruments 3.2 Procedures in cleaning, and stowing equipment and instruments	3.1 Applying methods/ practices in using measuring devices and instruments 3.2 Cleaning and stowing measuring devices and instruments

RANGE OF VARIABLES

VARIABLE	RANGE
1. Standard measuring devices	May include but not limited to: 1.1 Weighing scales and balances of various capacities and sensitivities 1.2 Measuring cups of varying capacities for dry ingredients 1.3 Measuring cups of varying capacities for liquid ingredients
2. Standard measuring instruments	May include but not limited to: 2.1 Salinometer 2.2 Thermometers of varying temperature range (0-300 C) 2.3 Refractometer of varying range (0 – 90 B) 2.4 Glasswares like cylinders, beakers, flasks) of varying graduations
3. Food Processing Methods	May include but not limited to: 3.1 Process foods by Salting, Curing, and Smoking 3.2 Process foods by Fermentation and Pickling 3.3 Process foods by Canning and Bottling 3.4 Process foods by Sugar Concentration 3.5 Process foods by Drying and Dehydration

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Identified, prepared and calibrated standard measuring devices and instruments 1.2 Followed correctly the procedures in using standard measuring devices and instruments 1.3 Followed proper cleaning and sanitizing and stowing procedures of measuring devices and equipment before and after use
2. Resource Implications	The following resources should be provided: 2.1 Work area/station 2.2 Materials, tools and equipment relevant to the unit of Competency
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Direct observation and questioning of a candidate using measuring devices and instruments
4. Context of Assessment	4.1 Competency maybe assessed in actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY   :   PERFORM MATHEMATICAL COMPUTATIONS

UNIT CODE   :   PFB751213

UNIT DESCRIPTOR   :   This unit covers the knowledge, skills and attitude to perform mathematical computations in the workplace.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variable	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Gather and Tabulate the Recorded Data	1.1 Records of **weights and measurements** of raw materials and ingredients are gathered and summarized according to workplace standard operating procedures. 1.2 Records of weights and measurements of finished processed products are gathered and summarized according to workplace standard operating procedures. 1.3 Summarized data are tabulated according to enterprise requirements.	1.1 Data gathering 1.2 Record keeping 1.3 Data summary and analysis 1.4 Basic Mathematical Operations	1.1 Gathering data 1.2 Keeping of records 1.3 Summarizing and analyzing data 1.4 Basic Mathematical skills 1.5 Basic Accounting skills
2. Review the Procedures in Using Standard Measuring Devices and Instruments	2.1 Raw materials and ingredients and percentage formulations are checked/counter checked according to approved specifications and enterprise requirements. 2.2 Printed procedures/ brochures/ catalogues are consulted according to specified *food* processing methods. 2.3 Finished products and percentage formulations are reviewed according to approved specifications and enterprise requirements.	2.1 Percentages and formulations of raw materials and ingredient and finished products 2.2 Procedures in checking raw materials and finished products formulation and percentages 2.3 Basic Mathematical Operations	2.1 Checking percentages formulations of raw materials and ingredient 2.2 Reviewing percentages and formulations of finished products 2.3 Numeracy skills

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variable	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Calculate Production Input and Output	3.1 Data on raw material consumption and corresponding percentage equivalent are calculated in line with enterprise requirements. 3.2 Data on actual spoilage and rejects and corresponding percentage equivalents are calculated according to enterprise requirements. 3.3 Data on actual yields and recoveries and corresponding percentage equivalents are calculated according to enterprise requirements. 3.4 All calculated data are recorded according to enterprise requirements.	3.1 Record keeping 3.2 Mensuration 3.3 Fraction, ratios and proportions 3.4 Basic Mathematical Operations 3.5 Conversion factors 3.6 Percentage formulation	3.1 Basic Mathematical skills 3.2 Recording skills
4. Compute Production Cost	4.1 *Costs of production* are computed according to organization's standard procedures. 4.2 4.2 Computed costs of production are reviewed and validated according to organization's production requirements.	4.1 Cost of production 4.2 Validation procedures for computer costs 4.3 Basic Mathematical Operations	4.1 Basic Mathematical skills 4.2 Basic Accounting skills 4.3 Reviewing and validating computed costs

RANGE OF VARIABLES

VARIABLE	RANGE
1. Weight and Measurements	May include but not limited to: 1.1 Gravimetric 1.2 Volumetric 1.3 Lengths, diameters, widths 1.4 Seam measurements 1.5 Hotness/coldness (temperature) 1.6 Concentrations of solutions
2. Costs of Productions	May include but not limited to: 2.1 Ingredient formulation 2.2 Percentage formulation 2.3 Conversion 2.4 Ratios and proportion 2.5 Spoilage and rejects and corresponding percentages 2.6 Recoveries and yields and corresponding percentages

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Gathered the records of weights and measurements of raw materials/ingredients and finished processed products 1.2 Summarized and tabulated all raw data gathered 1.3 Calculated the production inputs and outputs 1.4 Computed the costs of production 1.5 Reviewed all formulations and concentrations of solutions according to specifications and standards of the enterprise
2. Resource Implications	The following resources should be provided: 2.1 Work area/station 2.2 Materials relevant to recording and documentation of production data 2.1 Computer with printer and software 2.4 Calculator 2.4 Work table
3. Method of assessment	Competency in this unit must be assessed through: 3.1 A combination of direct observation and questioning of a candidate computing costs of production 3.3 Submission of a written report showing
4. Context of Assessment	4.1 Competency maybe assessed in actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY **:** **IMPLEMENT GOOD MANUFACTURING PRACTICE AND PROCEDURES**

UNIT CODE **:** **PFB751214**

UNIT DESCRIPTOR **:** This unit covers the knowledge, skills and attitudes required to comply with relevant Good Manufacturing Practice (GMP) codes through the implementation of workplace GMP and quality procedures.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify requirements of GMP related to own work	1.1 Sources of information on GMP requirements are located. 1.2 GMP requirements and responsibilities related to own work are identified.	1.1 GMP Requirements 1.2 GMP Codes of practice, policies and procedures 1.3 GMP Role of internal and external auditors 1.4 Contamination events and performance improvement processes procedures 1.5 Personal clothing and footwear requirements at work areas 1.6 Use of personal clothing, storage and disposal requirements 1.7 Micro biological, physical and chemical contaminants 1.8 Basic concepts of quality assurance 1.9 Control methods and procedures used in GMP: 1.10 GMP responsibilities and requirements relating to work role 1.11 Basic properties, handling and	1.1 Planning and organizing work (time management 1.2 Working with others and in teams 1.3 Practicing GMP 1.4 Following contamination investigation procedures

		storage requirements of raw materials, packaging components and final product	
		1.12 Standards for materials, equipment and utensils used in the work area	
		1.13 Recall and traceability procedures relevant to work role	
		1.14 Procedures for identifying or isolating materials or product of unacceptable quality	
		1.15 Record keeping and the recording requirements of GMP	
2. Observe personal hygiene and conduct to meet GMP requirements	2.1 Personal hygiene meets GMP requirements. 2.2 Clothing is prepared, used, stored and disposed of according to GMP and workplace procedures. 2.3 Personal movement around the workplace complies with area entry and exit procedures.	2.1 Workplace entry and exit procedures 2.2 Personal hygiene 2.3 PPE	2.1 Following workplace entry and exit procedures 2.2 Practicing OSHS 2.3 Practicing GMP
3. Implement GMP requirements when carrying out work activities	3.1 GMP requirements are identified. 3.2 **Work area**, materials, equipment and product are routinely monitored to ensure compliance with GMP requirements. 3.3 Raw materials, packaging components and product are handled according to GMP and workplace procedures. 3.4 Workplace procedures to control resource allocation and process are followed to meet GMP requirements.	3.1 Monitoring methods of work area, materials and equipment 3.2 Handling of raw materials, packaging components and product 3.3 Control resource allocation and processes in the workplace 3.4 Contaminants 3.5 Good Manufacturing Practices (GMP)	3.1 Identifying GMP requirements 3.2 Monitoring routinely of work area, materials equipment and product 3.3 Handling of raw materials, packaging components and product 3.4 Maintaining cleanliness in the workplace

	3.5 Common forms of contamination are identified and appropriate control measures are followed according to GMP requirements. 3.6 The workplace is maintained in a clean and tidy order to meet GMP housekeeping standard.		
4. Participate in improving GMP	4.1 Processes, practices or conditions which could result in non-compliance with GMP are identified and reported according to workplace reporting requirements. 4.2 Corrective action is implemented within level of responsibility. 4.3 GMP issues are raised with designated personnel.	4.1 Non-compliance and corrective action in GMP 4.2 Corrective actions	4.1 Practicing GMP 4.2 Reporting workplace condition 4.3 Implementing corrective measures
5. Participate in validation processes	5.1 Validation procedures are followed to GMP requirements. 5.2 Issues arising from validation are raised with designated personnel. 5.3 Validation procedures are documented to meet GMP requirements.	5.1 Validation procedures in GMP 5.2 Issues arising from validation 5.3 Documentation of validation procedures	5.1 Following validation procedures 5.2 Reporting issues arising from validation 5.3 Documenting validation procedures
6. Complete workplace documentation to support GMP	6.1 Documentation and recording requirements are identified. 6.2 Information is recorded according to ***workplace reporting procedures*** to meet GMP requirements.	6.1 Documentation and workplace reporting procedures in GMP 6.2 Information and workplace reporting procedures	6.1 Keeping records 6.2 Recording information

RANGE OF VARIABLES

VARIABLE	RANGE

1. Work Area	May include but not limited to:
	1.1 Safety Protocols
	    1.1.1 Proper use of PPE
	    1.1.2 Knowledge of emergency procedures (fire, spills, injuries)
	    1.1.3 Awareness of safety hazards in the work area
	1.2 Equipment handling
	    1.2.1 Competency in operating meat fabrication tools and machinery
	    1.2.2 Understanding of equipment maintenance and cleaning procedures
	1.3 Quality Control
	    1.3.1 Ability to inspect raw materials for quality and freshness
	    1.3.2 Understanding of quality standards for different meat products
	1.4 Hygiene and Sanitation
	    1.4.1 Adherence to cleanliness and sanitation standards
	    1.4.2 Knowledge of cleanliness and sanitation standards
	1.5 Workplace Organization
	    1.5.1 Efficient layout of workstations
	    1.5.2 Inventory management and stock rotation practices
	    1.5.3 Workflow optimization for productivity
	1.6 Communication
	    1.6.1 Effective communication with team members and supervisors
	    1.6.2 Reporting issues or discrepancies promptly

2. Workplace reporting procedures	May include but not limited to:
	2.1 Incident Reporting
	    2.1.1 Procedures for reporting accidents, injuries, or near misses
	    2.1.2 Documentation requirements for incidents
	2.2 Quality Control Reporting
	    2.2.1 Processes for reporting defective products or deviations from quality standards
	    2.2.2 Documentation of quality control checks and results
	2.3. Equipment Malfunction
	    2.3.1 Reporting procedures for malfunctioning equipment
	    2.3.2 Logging equipment issues and maintenance requests
	2.4. Inventory Reporting
	    2.4.1 Procedures for reporting low stock or damages goods

	2.4.2 Documentation of inventory levels and restocking needs
	2.5 Communication Protocols
	    2.5.1 Methods for reporting to supervisors and colleagues (verbal, written, digital)
	    2.5.2 Chain of command for reporting different types of issues
	2.6 Compliance and Regulation
	    2.6.1 Procedures for reporting non-compliance with regulations and standards
	    2.6.2 Documentation of corrective actions taken to ensure compliance
	2.7 Training and skills gaps
	    2.7.1 Reporting procedures for identifying skills gaps among employees
	    2.7.2. Documentation of training needs and plans for skill development

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Located and followed workplace information relating to GMP responsibilities
	1.2 Maintained personal hygiene consistent with GMP
	1.3 Followed workplace procedures when moving around the workplace and/or from one task to another to maintain GMP
	1.4 Used, stored and disposed of appropriate clothing/footwear as required by work tasks and consistent with GMP
	1.5 Identified and reported situations that do or could compromise GMP
	1.6 Applied appropriate control measures to control contamination
	1.7 Recorded results of monitoring, and maintain records as required by GMP
	1.8 Followed validation procedures within level of responsibility
	1.9 Identified and responded to out-of-specification or unacceptable raw materials, packaging components, final or part processed product within level of responsibility
	1.10 Followed procedures to isolate or quarantine non-conforming product
	1.11 Handled, cleaned and stored equipment, utensils, raw materials, packaging components and related items according to GMP and workplace procedures
	1.12 Maintained GMP for own work
	1.13 Handled and/or disposed of out-of-specification or contaminated materials, packaging components/consumables and product, waste and recyclable material according to GMP as required by work responsibilities
	1.14 Maintained the work area in a clean and tidy state
	1.15 Identified and reported signs of pest infestation
2. Resource Implications	The following resources should be provided:
	2.1 Workplace location and access to workplace policies
	2.3 Materials relevant to the proposed activity and tasks
3. Method of assessment	Competency in this unit maybe be assessed using at least two (2) of the following methods:
	3.1 A combination of direct observation and oral questioning
	3.2 Written report
	3.3 Written Examination
	3.4 Portfolio
4. Context of Assessment	4.1 Competency maybe assessed in actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY : **IMPLEMENT ENVIRONMENTAL POLICIES AND PROCEDURES**

UNIT CODE : **PFB751215**

UNIT DESCRIPTOR : This unit covers skills and attitude required to implement environmental policies and procedures when carrying out work responsibilities.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Conduct work in accordance with environmental policies and procedures	1.1 Immediate work area is routinely checked to ensure compliance with environmental requirements. 1.2 ***Hazards*** and unacceptable performance are identified, removed and/or reported to appropriate personnel according to workplace procedures. 1.3 Workplace procedures and work instructions are followed. 1.4 Where control requirements are not met, incidents are promptly reported and corrective action is taken. 1.5 Measures used to minimize and handle waste are followed. 1.6 1.6. Environmental data is recorded in required format according to workplace reporting requirements.	1.1 Workplace approach to managing environmental issues 1.2 Responsibilities of self and employer to manage environmental issues on site 1.3 Sources of advice on environmental issues in the workplace 1.4 Environmental hazards and risks associated with the work 1.5 Work procedures as they relate to environmental responsibilities 1.6 Procedures used to prevent or control environmental risks associated with own work 1.7 Basic concepts of hazard identification, risk assessment and control options 1.8 Identifying and responding to hazards	1.1 Planning and organizing work (time management) 1.2 Working with others and in teams 1.3 Practicing environmental skills

		1.9 Impact of work practices on resource utilization and wastage 1.10 Procedures used to handle and dispose of waste 1.11 The difference between trade waste and storm water drains 1.12 Consequences of inappropriate waste handling and disposal 1.13 Procedures for responding to unplanned incidents such as spills and leaks 1.14 Emergency response system and procedures 1.15 Responsible use of resources in own work area 1.16 Reporting procedures and responsibilities 1.17 Consultative processes in the workplace for raising issues/ suggestions on environmental issues	
2. Participate in improving environmental practices at work	2.1 Processes or conditions which could result in an unacceptable environmental outcome are identified and reported according to workplace reporting requirements. 2.2 Corrective action is taken in accordance with the environmental management and emergency response plans as required. 2.3 Contributions are made to participative arrangements for managing environmental issues in the workplace within	2.1 Unacceptable environmental outcomes 2.2 Corrective actions 2.3 Emergency response plan 2.4 Improvement in environmental practices 2.5 Report preparation	2.1 Identifying and reporting unacceptable environmental outcomes 2.2 Implementing corrective actions 2.3 Participating in improvement of environmental practices 2.4 Practicing written communication skills

	workplace procedures and level of responsibility.		
3. Respend to an environmental emergency	3.1 Emergency situations are identified and reported according to workplace reporting requirements 3.2 Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures	3.1 Emergency situations 3.2 Emergency procedures	3.1 Identifying emergency situations 3.2 Following emergency procedures 3.3 Practicing written communication skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Hazards	**May include but not limited to:** 1.1. Equipment Safety 1.2. Physical Hazards 1.3. Chemical Hazards 1.4. Biological Hazards 1.5. Fire Safety 1.6. Emergency Hazards

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Accessed and apply workplace information on environmental policies and procedures relating to own work 1.2 Fitted and used appropriate personal protective clothing and equipment 1.3 Checked own work area to identify environmental hazards 1.4 Reported hazards according to workplace procedure in a clear and timely manner 1.5 Followed work procedures to control or minimize environmental risk. This may include monitoring parameters set for environmental aspects such as airborne particulate, noise, and water quality. It may also include demonstrating use of emergency equipment according to work role requirements 1.6 Recorded environmental information as required by the environmental management program 1.7 Participated in processes to raise issues and suggestions to improve environmental issues management. This requires appropriate communication skills to structure and present information and interact with others 1.8 Followed procedures to collect, deposit, recycle and/or dispose of waste in own work area 1.9 Followed procedures to respond to environmental emergencies such as spills and emissions. This may include following procedures to alert the appropriate emergency services 1.10 Maintained housekeeping standards in work area
2. Resource Implications	The following resources should be provided: 2.1 Workplace location and access to workplace policies 2.2 Materials relevant to the proposed activity and tasks
3 Method of assessment	Competency in this unit maybe be assessed using at least two (2) of the following methods: 3.1 A combination of direct observation and oral questioning 3.2 Written report 3.3 Written Examination 3.4 Portfolio
4 Context of Assessment	4.1 Competency maybe assessed in actual workplace or at the designated TESDA Accredited Assessment Center.

CORE COMPETENCIES

UNIT OF COMPETENCY **:** **PERFORM HALAL PRE-SEAWEED PROCESSING ACTIVITIES**

UNIT CODE **:** **AB-190700200-PFB751301**

UNIT DESCRIPTOR **:** This unit covers the knowledge, skills and attitudes required to prepare and maintain raw dried seaweeds and prepare work area for seaweeds processing

ELEMENT	PERFORMANCE CRITERIA *Italicized* terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare raw dried seaweeds	1.1 *PPE* is worn based on Occupational Health Safety (OHS) Standards and Halal Standards 1.2 Raw dried seaweeds are received from *relevant personnel* in accordance with Food and Safety Standards and Halal Standards 1.3 Raw dried seaweeds are ensured of Halal Compliance 1.4 Raw dried seaweeds are *checked* based on industry standards 1.5 Raw dried seaweeds are cleaned in accordance with Good Manufacturing Practices and Halal Standards 1.6 Tools and materials are prepared for *bleaching* based on Good Manufacturing Practices, Occupational Health Safety Standards and Halal Standards 1.7 Raw dried seaweeds are bleached based on Good Manufacturing Practices, Occupational Health Safety Standards and Halal Standards	**Environmental Issues and Other Concerns** 1.1 Occupational Health Safety (OHS) 1.2 Food and Safety Standards 1.3 Good Manufacturing Practices **Science** 1.4 Food contamination 1.5 Characteristics of raw dried seaweeds 1.6 Methods of bleaching 1.7 Bleaching agents 1.8 Moisture content **Technology** 1.9 Use of moisture analyzer 1.10 Packing of raw dried seaweeds with appropriate materials and equipment 1.11 Proper labeling of packed raw dried seaweeds	1.1 Proper wearing of PPE 1.2 Communicating in the workplace 1.3 Receiving of raw dried seaweeds 1.4 Checking of raw dried seaweeds 1.5 Cleaning of raw dried seaweeds 1.6 Preparing tools and materials for bleaching 1.7 Bleaching of raw dried seaweeds 1.8 Rinsing of bleached seaweeds 1.9 Preparing drying area 1.10 Drying of rinsed seaweeds 1.11 Packing of raw dried seaweeds 1.12 Labeling of packed raw dried seaweeds (FIFO) 1.13 Storing of raw dried seaweeds

	1.8 Bleached seaweeds are rinsed based on Good Manufacturing Practices, Occupational Health and Safety Standards and Halal Standards 1.9 Drying area is clean and secured from animals in accordance with Halal Standards 1.10 Rinsed seaweeds are dried based on industry standards and Halal Standards 1.11 Dried raw seaweeds are *weighed* based on industry standards 1.12 Raw dried seaweeds are packed in accordance with industry standards and Halal Standards 1.13 Packed raw dried seaweeds are stored based on Food and Safety Standards and Halal Standards	**Mathematics** 1.12 Ratio of bleaching agents to raw dried seaweeds **Communication** 1.13 Communicating with relevant personnel **Halal-related** 1.14 Halal Certifying Body 1.15 Halal Standards	
2. Prepare work area	2.1 *PPE i*s worn based on Occupational Health Safety (OHS) Standards and Halal Standards 2.2 *Cleaning tools and materials* are prepared and organized based on Occupational Health Safety (OHS) Standards and Halal Standards 2.3 Work area is cleaned and sanitized based on Food and Safety Standards and Halal Standards 2.4 *Processing utensils and materials* are prepared and organized in accordance with industry standards, Food and Safety Standards, and Halal Standards 2.5 Work area is secured from pets and animals and/or Najjis in	**Environmental Issues and Other Concerns** 2.1 Occupational Health Safety (OHS) 2.2 Food and Safety Standards **Science** 2.3 Food contamination 2.4 Cleaning agents including surfactants, detergents, and solvents 2.5 Disinfectants and sanitizers such as chlorine, quaternary ammonium compounds, and alcohols **Engineering** 2.6 Workflow optimization	2.1 Proper wearing of PPE 2.2 Preparing and organizing utensils and materials 2.3 Cleaning and sanitizing work area 2.4 Securing work area from pets and animals and/or Najjis 2.5 Inspecting work area 2.6 Communicating in the workplace

	accordance with Halal Standards 2.6 Work area is inspected in accordance with industry standards	**Technology** 2.7 Proper use of cleaning tools and materials **Mathematics** 2.8 Ratio of cleaning agents with water **Communication** 2.9 Communication and reporting procedure **Halal-related** 2.10 Halal Standards	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Personal Protective Equipment (PPE)	May include but not limited to: 1.1 Gloves 1.2 Hairnet 1.3 Masks 1.4 Boots 1.5 Lab Gown / Apron 1.6 Safety glasses
2. Relevant personnel	May include but not limited to: 2.1 Storage keeper 2.2 Farmer 2.3 Suppliers
3. Checked	May include but not limited to: 3.1 Checking for discoloration 3.2 Checking moisture content using moisture analyzer
4. Bleached	May include but not limited to the use of: 4.1 Unscented detergent 4.2 Natural bleaching agents such as lemon
5. Weighed	May include but not limited to the use of: 5.1 Digital weighing scale 5.2 Mechanical weighing scale
6. Cleaning tools and materials	Tools may include but not limited to: 6.1 Gloves 6.2 Brush 6.3 Mop 6.4 Pail/Bucket 6.5 Dipper 6.6 Dust pan 6.7 Broom 6.8 Trash bins 6.9 Spray bottles 6.10 Water Hose Materials may include but not limited to: 6.12 Detergents 6.13 Fabric Conditioner 6.14 Water 6.15 Bleaching solution 6.16 Garbage bags 6.17 Damp clothes
7. Processing utensils and materials	May include but not limited to: 7.1 Basin 7.2 Measuring spoon and cup 7.3 Colander 7.4 Casserole 7.5 Plastic chopping board 7.6 Stainless Knife 7.7 Stainless Tray 7.8 Weighing scale 7.9 Strainer

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Prepared raw dried seaweeds in accordance with Good Manufacturing Practices, Food and Safety Standards and Halal Standards 1.2 Prepared work area based on Good Manufacturing Practices, Food and Safety Standards and Halal Standards
2. Resource Implications	The following resources MUST be provided: 2.1 Workplace location 2.2 Tools, materials and equipment relevant to the element 2.3 Materials relevant to the proposed activity and tasks
3. Methods of Assessment	Competency in this unit may be assessed through but not limited to: 3.1 Direct Observation 3.2 Demonstration with Oral Questioning 3.3 Written Test
4. Context for Assessment	4.1 Competency may be assessed in the actual workplace or the designated simulation environment in TESDA Registered School.

UNIT OF COMPETENCY : **PRODUCE HALAL SEAWEED-BASED PRODUCTS (NOODLES AND CHIPS)**

UNIT CODE : **AB-190700200-PFB751302**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude required to process raw dried seaweeds into the desired products in accordance with the Halal Standards.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Process bleached dried seaweeds into carrageenan	1.1 *Required PPE* is worn based on Occupational Health Safety (OHS) Standards and Halal Standards 1.2 Bleached dried seaweeds are soaked in distilled water in accordance with Food and Safety Standards and Halal Standards 1.3 Soaked dried seaweeds is *milled /grinded* in accordance with Food and Safety Standards and Halal Standards 1.4 Milled/grinded dried seaweed is boiled to extract carrageenan based on industry standards 1.5 Carrageenan is strained based on industry standards 1.6 Puree (carrageenan) is powderized, in accordance with Food and Drug Administration Standards and Halal Standards, if needed 1.7 Carrageenan is subjected to *quality control* based on industry standards 1.8 Carrageenan is stored in accordance with Food and Safety Standards and Halal Standards	**Environmental Issues and Other Concerns** 1.1 Occupational Health Safety (OHS) 1.2 Food and Safety Standards 1.3 Food and Drug Administration Standard **Science** 1.4 Moisture Content, Carrageenan levels (Weight ratio of carrageenan extracted from dried raw seaweeds) 1.5 Carrageenan **Engineering** 1.6 Basic thermodynamics (temperature) 1.7 Equilibrium of drying extracted carrageenan **Technology** 1.8 Proper purifying **Mathematics** 1.9 Weight ratio of carrageenan extracted from dried raw seaweeds	1.1 Proper wearing of PPE 1.2 Soaking of bleached dried seaweeds 1.3 Milling / Grinding of soaked dried seaweeds 1.4 Boiling of milled/grinded dried seaweed 1.5 Straining of carrageenan 1.5 Powderizing carrageenan 1.6 Quality control 1.7 Storing of puree and powderized carrageenan 1.8 Good manufacturing practices skills

		Communication 1.10 Communicating in the workplace 1.11 Documentation and Reporting Halal-related 1.12 Halal Standards	
2. Perform preparatory activities for seaweeds processing	2.1 *Required PPE* is worn based on Occupational Health Safety (OHS) Standards 2.2 Capacity of equipment to be used for processing is checked based on industry and processing requirement standards 2.3 Test-run on processing equipment is conducted based on operational manuals for seaweed processing 2.4 Processing equipment is re-calibrated based on operational manuals for seaweed processing 2.5 Processing equipment is sanitized based on sanitization standards and operating procedures and Halal Standards 2.6 Quantity of carrageenan for noodle / chip processing/production is determined based on good manufacturing procedures and recipe for seaweed processing 2.7 Carrageenan is prepared for noodle / chip processing/production based on good manufacturing standards 2.8 *Processing utensils and materials* are prepared based on current good manufacturing practices and Halal standards	**Environmental Issues and Other Concerns** 2.1 Proper waste disposal 2.2 Sanitization standards 2.3 Food and safety management system **Science** 2.4 Food and Drugs Administration (FDA) 2.5 Proper hand washing techniques **Engineering** 2.6 Machineries and Equipment Management **Technology** 2.7 Good manufacturing procedures for seaweed processing 2.8 Sanitization standards operating procedures for seaweed processing 2.9 Hazard analysis critical control point **Mathematics** 2.10 Basic calculation of the quantity to be used for processing/production **Communication**	2.1 Proper wearing of PPEs based on Occupational Health Safety (OHS) Standards 2.2 Checking the capacity of equipment to be used for processing 2.3 Test running the processing equipment 2.4 Re-calibrating of processing equipment 2.5 Receiving seaweed puree/ powdered carrageenan 2.6 Determining the quantity of processed seaweeds for noodle processing/production 2.7 Preparing seaweed puree/ powdered carrageenan for noodle / chip processing/production 2.8 Preparing processing utensils and materials 2.9 Interpersonal communication skills 2.10 Basic Mathematical Skills

		2.11 Communicate with relevant personnel **Halal-related** 2.12 Halal Standards	
3. Process puree or powderized carrageenan into Halal seaweeds noodles	3.1 *Required PPE* is worn based on Occupational Health Safety (OHS) Standards 3.2 *Seaweed noodle main ingredients* and **other ingredients for noodles** are checked for Halal Certification 3.3 Water is checked based on Philippine National Standards for Drinking Water – FDA 3.4 Required *seaweed noodle ingredients* is prepared based on proper handling procedures and/or techniques and Halal Standards 3.5 Required seaweed noodle ingredients are measured based on required recipe and industry standards 3.6 Seaweed noodle main ingredients and other ingredients for noodles are mixed and formed into dough in accordance with Halal Standards and Food and Safety Standards 3.7 Dough is kneaded to flatten based on good manufacturing procedures for seaweed processing, Sanitization standards operating procedures for seaweed processing and Halal Standards 3.8 The flattened dough is fed into the prepared *processing equipment for noodles* based on good manufacturing practices, sanitization standards, hazard analysis and critical	**Environmental Issues and Other Concerns** 3.1 Occupational Health Safety (OHS) 3.2 Food and Safety Standards 3.3 Food and Drug Administration Standard 3.4 Philippine National Standards for Drinking Water 3.5 Hazard analysis and critical control point 3.6 Sanitization Standards **Science** 3.7 Moisture content of noodles 3.8 Sensory Evaluation (taste, texture, aroma, appearance) 3.9 Temperature 3.10 Equilibrium of drying seaweed noodles **Technology** 3.11 Proper drying using drying method 3.12 Using processing equipment for noodles **Mathematics** 3.13 Ratio of puree / powderized carrageenan and other ingredients **Communication** 3.14 Communicating in the workplace **Halal-related** 3.15 Halal Standards	3.1 Proper wearing of PPE 3.2 Determining Al Dente texture 3.3 Checking for Halal Certification 3.4 Good manufacturing practices skills 3.5 Proper wearing of PPEs Checking based on Occupational Health Safety (OHS) Standards 3.6 Checking of ingredients for Halal Certification 3.7 Preparing seaweed noodles main and other ingredients 3.8 Mixing and kneading seaweed noodles ingredients into dough 3.9 Using noodle machine 3.10 Checking for Al Dente of cooked noodles

	control point and halal standards		
	3.9 Noodle strands are collected for further processing based on good manufacturing practices sanitization standards, hazard analysis and critical control point and halal standards		
	3.10 Collected noodles are cooked in boiling water while maintaining its boiling temperature for 3-5 minutes based on industry standards		
	3.11 Cooked noodles are checked for Al Dente texture based on industry standards		
	3.12 Al Dente noodles are strained based on industry standards		
	3.13 Al Dente noodles are refrigerated and stored, if necessary, based industry standards and Halal Standards		
	3.14 Al Dente noodles are dried using preferred *drying method* based on industry standards and Halal Standards		
4. Process puree or powderized carrageenan into Halal seaweeds chips	4.1 *Required PPE is worn for operation* based on Occupational Health Safety (OHS) Standards 4.2 *Seaweed chip main* and *other ingredients* are checked for Halal Certification 4.3 Water is checked based on Philippine National Standards for Drinking Water – FDA 4.4 Required *seaweed chip main ingredients* are prepared based on proper handling procedures and techniques	**Environmental Issues and Other Concerns** 4.1 Occupational Health Safety (OHS) 4.2 Food and Safety Standards 4.3 Food and Drug Administration Standard 4.4 Philippine National Standards for Drinking Water 4.5 Hazard analysis and critical control point 4.6 Sanitization Standards **Science** 4.7 Moisture content 4.8 Sensory Evaluation (taste,	4.1 Proper wearing of PPE 4.2 Proper cutting of dough 4.3 Checking for Halal Certification 4.4 Good manufacturing practices skills 4.5 Preparing seaweed noodles main and other ingredients 4.6 Mixing and kneading seaweed chips ingredients into dough 4.7 Using noodle machine to flatten dough 4.8 Frying cut dough

	4.5 Required seaweed chips main ingredients are measured based on industry standards	texture, aroma, appearance) 4.9 Temperature 4.10 Equilibrium of drying seaweed chip	
	4.6 Seaweed chips main ingredients and other ingredients for chips are mixed and formed into dough in accordance with Halal Standards and Food and Safety Standards	**Engineering** **Technology** 4.11 Proper cooling of fried seaweed chips	
	4.7 Dough is kneaded to be flattened based on good manufacturing procedures for seaweed processing, Sanitization standards operating procedures for seaweed processing and Halal Standards	**Mathematics** 4.12 Ratio of puree / powerderized carrageenan and other ingredients	
	4.8 Dough is further flattened using noodle machine or rolling pin based on good manufacturing practices, sanitization standards, hazard analysis and critical control point and halal standards	**Communication** 4.13 Communicating in the workplace **Halal-related** 4.14 Halal Standards	
	4.9 Flattened dough is cut into desired size using preferred *cutting tools* based on industry standards		
	4.10 Cut flattened dough is fried using *frying methods* at optimized temperature and time or at least reaches golden brown or desired crispiness based on industry standards, Halal Standards and Food and Safety Standards		
	4.11 *Desired flavor* is added based on industry standards		
	4.12 Fried chips are cooled based on good manufacturing practices, sanitization standards, hazard analysis and critical		

	control point and halal standards		

RANGE OF VARIABLES

VARIABLE	RANGE
1. Required Personal Protective Equipment (PPE)	May include but not limited to: 1.1 Gloves 1.2 Hairnet 1.3 Masks 1.4 Boots 1.5 Lab Gown / Apron 1.6 Safety glasses
2. Milled/Grinded	May include but not limited to: 2.1 Cutting/Shredding: Chopping seaweed into smaller pieces. 2.2 Grinding: Pulverizing seaweed into powder form for easier incorporation into products.
3. Quality Control	May include but not limited to: 5.1 Inspection: Checking for contaminants, proper moisture content, and overall quality. 5.2 Testing: Conducting laboratory tests for nutritional content, purity, and safety.
4. Other Ingredients for noodles	May include but not limited to: 4.1. Food coloring 4.2. Powderized moringa 4.3. Turmeric
5. Other Ingredients for chips	May include but not limited to: 5.1. Cheese and other flavorings 5.2. Onion 5.3. Garlic 5.4. White pepper 5.5. Chili 5.6. Baking powder
6. Desired flavor	May include but not limited to: 6.1. Cheese 6.2. Barbeque 6.3. Sweet and sour
7. Seaweed noodle main ingredients	May include but not limited to: 7.1. Flour 7.2. Lye water 7.3. Puree or carrageenan 7.4. Salt 7.5. Egg
8. Seaweed chip main ingredients	May include but not limited to: 8.1. Flour 8.2. Carrageenan or puree 8.3. Oil or butter 8.4. Starch 8.5. Salt
9. Processing equipment for noodles	May include but not limited to: 9.1. Manual noodle machine 9.2. Electric noodle machine
10. Drying method	May include but not limited to:

VARIABLE	RANGE
	10.1. Using solar dryer 10.2. Sun drying 10.3. Mechanical drying 10.4. Air drying
11. Frying methods	May include but not limited to: 11.1. Using vacuum fryer 11.2. Using frying pan
12. Cutting tools	May include but not limited to: 12.1. Knife 12.2. Dough cutter 12.3. Mechanical cutter

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Processed bleached dried seaweeds into carrageenan 1.2 Performed preparatory activities for seaweeds processing 1.3 Processed puree or powderized carrageenan into Halal seaweeds noodles 1.4 Processed puree or powderized carrageenan into Halal seaweeds chips
2. Resource Implications	The following resources MUST be provided: 2.1 Workplace location 2.2 Tools, materials and equipment relevant to the element 2.3 Materials relevant to the proposed activity and tasks
3. Methods of Assessment	Competency in this unit may be assessed through but not limited to: 3.1 Direct Observation 3.2 Demonstration with Oral Questioning 3.3 Written Test 3.4 Demonstration
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions

UNIT OF COMPETENCY	:	PERFORM POST-SEAWEED PROCESSING ACTIVITIES
UNIT CODE	:	AB-190700200-PFB751303
UNIT DESCRIPTOR	:	This unit covers the knowledge, skills and attitude required to perform post-seaweed processing activities. It includes cleaning and sanitation, packaging and marketing of products.

ELEMENT	PERFORMANCE CRITERIA *Italicized* terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS

1. Clean and sanitize work area	1.1 **PPE** is worn based on Occupational Health Safety (OHS) Standards and Halal Standards
	
	1.2 **Cleaning supplies** are prepared based on industry standards and Halal Standards
	
	1.3 **Dry cleaning** on work area is performed based on industry standards and Halal Standards
	
	1.4 **Wet cleaning** on work area is performed based on industry standards and Halal Standards
	
	1.5 Work area is **sanitized** based on industry standards, Food and Safety Standards and Halal Standards
	
	1.6 Work area is **dried** based on industry standards.
	
	1.7 Work area is **inspected** based on industry standards
	
	1.8 Record keeping is performed based on the industry standards
		Environmental Issues and Other Concerns
		1.1 Occupational Health Safety (OHS)
		1.2 Environment-related statutory and regulatory requirements
		1.3 Food and Safety Standards
		  Clean as you go
		  Proper solid waste management
		  3Rs
		1.4 5S
		
		Science
		1.5 Cleaning Agents including surfactants, detergents, and solvents
		1.6 Disinfectants and sanitizers such as chlorine, quaternary ammonium compounds, and alcohols
		
		Engineering
		1.7 Workflow optimization
		
		Mathematics
		1.8 Determining the ratio of disinfectant
			1.1 Proper wearing of PPE
			1.2 Preparing cleaning supplies
			1.3 Dry cleaning the work area
			1.4 Wet cleaning the work area
			1.5 Sanitizing the work area
			1.6 Drying the work area
			1.7 Inspecting the work area
			1.8 Disposing waste properly
			1.9 Performing reassembly and storage
			1.10 Observing personal hygiene

	1.9 Waste is ***properly disposed*** based on statutory and regulatory requirements 1.9 ***Reassembly*** and ***storage*** is performed based on industry standards 1.10 ***Personal hygiene*** is observed based on Occupational Health Safety (OHS) Standards and Halal Standards	**Communication** 1.9 Communicating in the workplace 1.10 Documentation and Reporting **Halal-related** 1.11 Halal Standards	
2. Clean and store utensils	2.1 ***PPE*** is worn based on Occupational Health Safety (OHS) Standards and Halal Standards 2.2 ***Cleaning supplies*** are prepared based on industry standards and Halal Standards 2.3 ***Pre-cleaning*** is performed based on industry standards 2.4 ***Utensils are cleaned*** based on industry standards and Halal Standards 2.5 Utensils are rinsed based on industry standards and Halal Standards 2.6 Utensils are ***sanitized*** based on industry standards and Halal Standards 2.7 ***Utensils are dried*** based on industry standards and Halal Standards	**Environmental Issues and Other Concerns** 2.1 Occupational Health Safety (OHS) 2.2 Environment-related statutory and regulatory requirements 2.3 Clean as you go 2.4 Proper solid waste management 2.5 3Rs 2.6 5S **Science** 2.3 Cleaning Agents such as detergents, 2.4 Disinfectants and sanitizers Sensory evaluation of sanitized utensils utensils **Engineering** 2.5 Workflow optimization **Communication** 2.6 Communicating in the workplace	2.1 Proper wearing of PPE 2.2 Preparing cleaning supplies 2.3 Performing pre-cleaning 2.4 Cleaning utensils 2.5 Rinsing utensils 2.6 Sanitizing utensils 2.7 Drying utensils 2.8 Inspecting utensils 2.9 Storing utensils 2.10 Performing record keeping 2.11 Observing personal hygiene

	2.8 *Utensils are inspected* based on industry standards and Halal Standards	2.7 Documentation and Reporting	
	2.9 Utensils are stored based on industry standards and Halal Standards	**Halal-related:** 2.9 Halal Standards	
	2.10 *Record keeping* is performed based on industry standards		
	2.11 Proper Personal hygiene is observed based on Occupational Health Safety (OHS) Standards and Halal Standards		
3. Package processed seaweed-based products	3.1 *PPE* is worn based on Occupational Health Safety (OHS) Standards and Halal Standards 3.2 *Packaging materials* are prepared in accordance with industry standards and Halal Standards. 3.3 Product is *inspected* based on industry standards and Halal Standards 3.4 Product is packaged in accordance with industry standards, FDA and Halal Standards 3.5 Product is labeled based on industry standards, FDA and Halal Standards 3.6 *Inspection and quality control* is performed based on industry standards	**Environmental Issues and Other Concerns** 3.1 Occupational Health Safety (OHS) 3.2 Food and Safety Standards 3.3 Food and Drug Administration Standard 3.4 Environment-related statutory and regulatory requirements 3.5 Clean as you go 3.6 Proper solid waste management 3.7 3Rs 3.8 5S **Science** 3.4 Properties of different packaging materials, such as plastics, glass, metal, and paper, to select the most appropriate one for the product. Sensory Evaluation	3.1 Proper wearing of PPE 3.2 Preparing packaging materials 3.3 Inspecting product 3.4 Packaging product 3.5 Labeling packaged product 3.6 Performing inspection and quality control 3.7. Performing secondary packaging 3.8 Securing and storing packaged and labeled product 3.9 Performing documentation 3.10 Disposing waste properly

	3.7. *Secondary packaging* is performed based on industry standards 3.8 Packaged and labeled product is secured and stored in a cool and dry area in accordance with Food and Safety Standards and Halal Standards 3.9 *Documentation* is performed based on industry standards 3.10 Waste is properly disposed based on statutory and regulatory requirements	**Engineering** 3.5 **Technology** 3.6 **Communication** 3.7 Communicating in the workplace 3.8 Documentation and Reporting **Halal-related** 3.9 Halal Standards	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Personal Protective Equipment (PPE)	May include but no limited to: 1.1 Gloves 1.2 Masks 1.3 Boots 1.4 Lab Gown / Apron 1.5 Safety glasses
2. Cleaning supplies	May include but no limited to: 2.1 Cleaning agent 2.2 Detergent 2.3 Scrub 2.4 Brush 2.5 Cleaning pads 2.6 Chlorine 2.7 Broom 2.8 Dust pan 2.9 Mop
3. Dry cleaning	May include but not limited to: 3.1 Sweep Floors: Use brooms, dustpans, or vacuum cleaners to remove loose debris and dust from the floors. 3.2 Wipe Down Surfaces: Dry wipe surfaces to remove visible dirt and residues.
4. Wet cleaning	May include but not limited to: 4.1 Apply Cleaning Agents: Use appropriate cleaning solutions to disinfect surfaces, equipment, and tools. 4.2 Scrub and Rinse: Scrub surfaces with brushes or sponges and rinse with water to remove cleaning agents and dirt. 4.3 Clean Equipment: Ensure machinery and tools are thoroughly cleaned, paying attention to hard-to-reach areas.
5. Sanitizing	May include but not limited to: 5.1 Apply Sanitizers: Use approved sanitizing agents to disinfect surfaces, utensils, equipment, and tools. 5.2 Follow Contact Time: Ensure sanitizers remain on surfaces for the recommended time to effectively kill germs and bacteria.
6. Drying	May include but not limited to: 6.1 Air Dry or Wipe: Allow surfaces to air dry . 6.2. Wipe: Use clean, dry cloths to wipe down areas to prevent moisture accumulation
7. Inspection	May include but not limited to: 7.1 Quality Check: Inspect the cleaned area to ensure all surfaces and equipment meet cleanliness standards.

	6.2 Inspect for Residue: Check for any remaining cleaning or sanitizing agent residues and remove them if necessary.
8. Proper Disposal	May include but not limited to: 8.1 Dispose of Waste: Properly dispose of any waste materials, including used cleaning agents, wipes, and debris. 8.2 Recycle if Possible: Segregate and recycle materials that are eligible for recycling.
9. Reassembly	May include but not limited to: 9.1 Reassemble noodle machine 9.2 Reassemble vacuum fryer
10. Storage	May include but not limited to: 10.1 Return all cleaning tools 10.2 Return all supplies to their designated storage areas
11. Pre-cleaning	May include but not limited to: 11.1 Remove Residue: Scrape off any food particles or residues from the utensils. 11.2 Rinse with Water: Rinse the utensils with warm water to remove loose debris.
12. Utensils are cleaned	May include but not limited to: 12.1 Apply Cleaning Agents: Use appropriate cleaning solutions or detergents to scrub the utensils. 12.2 Scrub Thoroughly: Use brushes, sponges, or cloths to scrub all surfaces of the utensils, including hard-to-reach areas. 12.3 Use Hot Water: If possible, use hot water to enhance the cleaning effectiveness and kill bacteria.
14. Utensils are dried	May include but not limited to: 14.1 Air Dry: Allow the utensils to air dry on a clean surface. 14.2 Wipe: Use clean, dry cloths to wipe them down. 14.3 Ensure Complete Drying: Make sure that all utensils are completely dry before storing them to prevent mold and bacterial growth.
15. Utensils are inspected	May include but not limited to: 15.1 Quality Check: Inspect the utensils to ensure they are clean and free of any residues. 15.2 Re-clean if Necessary: If any utensils are not satisfactorily clean, repeat the cleaning process.
16. Utensils are stored	May include but not limited to: 16.1 Designated Storage Areas: Store the cleaned and dried utensils in their designated storage areas. 16.2 Avoid Cross-Contamination: Ensure that the storage area is clean and free from potential contaminants. 16.3 Organize Properly: Arrange utensils neatly to prevent damage and facilitate easy access for future use
17. Record keeping	May include but not limited to:

	17.1 Document Cleaning Activities: Keep records of the cleaning and sanitizing activities, including the date, time, and personnel involved.
	17.2 Compliance Logs: Maintain logs for regulatory compliance and traceability.
18. Packaging materials	May include but not limited to: (boxes, containers, bags, clear plastic pouch, Styrofoam, glass jars)
	18.1 Gather Packaging Materials: Ensure all necessary packaging materials etc.) are available.
	18.2 Check Equipment: Inspect and prepare packaging machinery and tools to ensure they are in proper working condition.
	18.3 Review Product Specifications: Verify the product specifications and packaging requirements for each batch.
19. Product is inspected	May include but not limited to:
	19.1 Quality Check: Inspect the products for defects or inconsistencies to ensure they meet quality standards.
	19.2 Weigh and Measure: Accurately weigh and measure products to ensure consistency and adherence to specifications.
20. Product is packaged	May include but not limited to:
	20.2 Fill Packaging: Place products into their respective packaging containers, ensuring proper portioning and placement.
	20.3 Seal Packaging: Securely seal the packaging using appropriate methods (e.g., heat sealing, taping, clamping).
	20.4 Include desiccant (to absorb moisture)
21. Product is labeled	May include but not limited to:
	21.1 Prepare Labels: Print or prepare labels with necessary information, including product name, batch number, expiration date, and other relevant details.
	21.2 Apply Labels: Affix labels to the packaging in a consistent and visible manner, ensuring they are properly aligned and adhered.
	21.3 Verify Label Accuracy: Double-check the information on the labels such as gross weight, net weight, nutritional facts, ingredients, potential allergens, details of the manufacturer to ensure accuracy and compliance with regulatory requirements.
	21.4 Halal Labels: For certified Halal Seaweeds (Noodles/ Chips), affix labels to the packaging in a consistent and visible manner.
22. Inspection and quality control	May include but not limited to:
	22.1 Check Seals and Labels: Inspect the sealed packages and labels to ensure they are correctly applied and secure.
	22.2 Conduct Spot Checks: Perform random quality checks on packaged products to ensure consistency and adherence to standards.

23. Secondary Packaging	May include but not limited to: 23.1 Group Packages: Group individual packages into larger containers or boxes for bulk handling and distribution. 23.2 Secure Bulk Packages: Ensure bulk packaging is securely sealed and labeled with necessary handling instructions.
24. Secured and stored	May include but not limited to: 24.1 Organize Packaged Products: Store packaged products in designated storage areas, ensuring they are organized and easily accessible. 24.2 Maintain Storage Conditions: Ensure storage conditions (temperature, humidity, etc.) are suitable for the products.
25. Documentation	May include but not limited to: 25.1 Record Packaging Details: Document packaging and labeling activities, including batch numbers, manufacturing date, expiry date, quantities, lot number and personnel involved. 25.2 Maintain Compliance Records: Keep records for regulatory compliance and traceability.

EVIDENCE GUIDE

1. Critical aspects of competency	**Assessment requires evidence that the candidate:** 1.1 Cleaned and sanitized work area based on Halal Standards 1.2 Cleaned and secured utensils based on Halal Standards 1.3 Packaged and labeled products based on Halal Standards 1.4 Marketed products based on Halal Standards
2. Resource Implications	The following resources MUST be provided: 2.1 Workplace location 2.2 Tools, materials and equipment relevant to the element 2.3 Materials relevant to the proposed activity and tasks Area
3. Methods of Assessment	Competency in this unit may be assessed through but not limited to: 3.1 Direct Observation 3.2 Demonstration with Oral Questioning 3.3 Written Test 3.4 Demonstration
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions

UNIT OF COMPETENCY : **MARKET SEAWEEDS-BASED PRODUCT**

UNIT CODE : **AB-190700200-PFB751304**

UNIT DESCRIPTOR : The unit deals with the knowledge, skills and attitudes required of seaweed-based product entrepreneur to monitor prevailing price of produce, apply marketing strategies and trade produce.

ELEMENT	PERFORMANCE CRITERIA *Italicized* terms are elaborated in the Range Statement	REQUIRED KNOWLEDGE	REQUIRED SKILL
1. Identify target markets	1.1 Area for business engagement is *profiled* (age, social status, demographic profile) based on relevant industry practices 1.2 Product specifications are determined according to *market requirements* 1.3 Similar products in the market are *assessed* following industry standards 1.4 Identify digital market	1.1 Principles of competition 1.2 Product awareness and differentiation with similar products 1.3 Product comparison 1.4 Business plan 1.5 Profit analysis 1.6 Trade associations 1.7 Product standards 1.8 Regulatory business requisites 1.9 Nature of product distribution network 1.10 Product specifications 1.11 Market situation 1.12 Digital marketing	1.1 Gathering basic data information 1.2 Analytical skills 1.3 Using social media platform 1.4 Interpersonal Relationship skills 1.5 Communication skills 1.6 Profiling area for business engagement 1.7 Determining product specification 1.8 Assessing similar products 1.9 Trimedia communication skills 1.10 Mathematical skills 1.13 Digital literacy skills

ELEMENT	PERFORMANCE CRITERIA *Italicized* **terms are elaborated in the Range Statement**	REQUIRED KNOWLEDGE	REQUIRED SKILL
2. Monitor prevailing price of seaweeds-based product	2.1 Major **buyers** and trading centers of the seaweed-based product is determined according to industry practice 2.2 Information on **price** is gathered following industry standard procedure 2.3 Price information is recorded following industry standard procedure	2.1 Types of buyers and trading centers 2.2 Criteria in determining major buyers 2.3 Supply and demand in relation to price movements 2.4 Sources of price information 2.5 Methods to monitor prices 2.6 Procedures in recording price information	2.1 Determining major buyers and trading centers 2.2 Gathering price information 2.3 Recording price information 2.4 Coordinating skills 2.5 Monitoring skills 2.6 Communication skills 2.7 Digital literacy skills
3. Apply marketing strategies	2.1 **Collected information** is used in strategizing to optimize sales and profit according to standard marketing procedure 2.2 **Value adding activities** are applied to increase sales and profit based on market plan 2.3 Services of **Business Development Service (BDS)** providers are identified based on industry practices	3.1 Types of collected information 3.2 Market strategizing 3.3 Computation on sales, cost and profit 3.4 Value adding activities 3.5 Kinds of Business service providers 3.6 Types of collaboration through cooperatives, associations, informal clusters	3.1 Using collected information in market strategizing 3.2 Applying value adding activities 3.3 Identifying services of business development service (BDS) providers 3.4 Coordinating skills 3.5 Computation skills 3.6 Record keeping
4. Sell seaweed-based product	4.1 Negotiation with buyers and **business development service** providers are performed according to industry practice 4.2 Sales terms and conditions are established and agreed following marketing practices and Halal Standards 4.3 Seaweed-based product for selling is	4.1 Sale negotiation 4.2 Sales arrangements 4.3 Preparation of seaweed-based product 4.4 Product delivery process with proper handling and traceability 4.5 Computation of sales, cost and profit 4.6 Record keeping of details on sales transaction 4.7 Halal standards	4.1 Negotiation skills 4.2 Computation skills 4.3 Establishing sales terms and conditions 4.4 Preparing seaweed-based product 4.5 Handling of product 4.6 Selling of product 4.7 Recording of details on sales transaction

ELEMENT	PERFORMANCE CRITERIA *Italicized* terms are elaborated in the Range Statement	REQUIRED KNOWLEDGE	REQUIRED SKILL
	prepared according to market requirements 4.4 Seaweed-based products are delivered to buyers based on agreement and Halal Standards 4.5 ***Details on sales transaction*** are recorded and kept as reference following industry practice		

RANGE OF VARIABLES

VARIABLE	RANGE
1. Buyers	Buyers may include but not limited to: 1.1 Local buyers 1.2 Supermarket 1.3 Local traders 1.4 Trading centers 1.5 Public market 1.6 Wholesaler 1.7 Retailer 1.8 Online buyer
2. Price	Price includes: 2.1. Price at the trading centers 2.2. Local market 2.3. Online price
3. Collected information	Collected information may include but not limited to: 3.1. Buyers 3.2. Value adding activities 3.3. Price 3.4. Volume 3.5. Quality 3.6. Terms of payment 3.7. Mode of delivery 3.8. Time
4. Value adding activities	Value adding activities may include but not limited to: 4.1. Creative Packaging 4.2. Environment friendly packaging 4.3. Added nutritive value 4.4. Promos 4.5. Payment method
5. Business development service (BDS)	Business Development Service (BDS) may include but not limited to: 5.1. Trucking 5.2. Warehousing 5.3. Training 5.4. Packaging materials provider 5.5. Ministry of Trade, Investments and Tourism (MTIT) 5.6. Ministry of Agriculture, Fisheries and Agrarian Reform (MFAR) 5.7. Ministry of Labor and Employment (MOLE) 5.8. Cooperative and Social Enterprise Authority (CSEA) 5.9. Ministry of Science and Technology (MOST) 5.10. Local Government Units
6. Details on sales transaction	Details of marketing transaction may include but not limited to: 6.1. Product deliveries 6.2. Sales 6.3. Buyer's information 6.4. Transaction date

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Monitored prevailing price of produce 1.2 Applied marketing strategies 1.3 Sold produce 1.4 Negotiated with buyers and business development services (BDS) providers
2. Resource Implications	The following resources should be provided: 2.1 Simulated workplace 2.2 Calculator 2.3 Phone Camera 2.4 Portable Speaker with microphone 2.5 Scissor 2.6 Pens (permanent & white board)/Chalk 2.7 Pencils 2.8 Ballpens 2.9 Flip charts Manila paper 2.10 Cartolina 2.11 Bond paper 2.12 Stapler 2.13 Staple wire 2.14 Puncher 2.15 Masking tape 2.16 Notebook 2.17 Record book 2.18 White/Black board 2.19 Crayons 2.20 Reference Materials
3. Method of Assessment	Competency in this unit may be assessed through: 3.1 Written examination 3.2 Oral questioning 3.3 Demonstration
4. Context of Assessment	4.1 Competency may be assessed in actual workplace or at the designated TESDA Accredited Assessment Center in a simulated workplace setting.

GLOSSARY OF TERMS

The following terms are operationally defined as follows:

Carrageenan	A substance widely used as an emulsifier, binder, gelling, and thickening agent in various food and non-food products to improve texture, maintain moisture, and enhance quality. *locally-made carrageenan*
Puree	Smooth blend of Raw Dried Seaweed
Sensory Evaluation	Assessment of food quality using human senses sight for appearance, smell for aroma, taste for flavor, touch for texture to ensure product acceptability.
Thermodynamics	Study of energy transformations, crucial for understanding heat treatment effects on food preservation (e.g. freezing, cooking).
Equilibrium	State where processes (e.g., water loss) are balanced, essential for maintaining stability in preserved food products.
Optimization	Process of finding the best processing and preservation conditions (temperature, humidity, preservatives) to maximize shelf life and quality.
Bleaching	Removal of pigments or unwanted components to improve appearance and reduce spoilage in food products.
Moisture Content	Percentage of water in food products, important for texture, shelf life, and preventing microbial growth. Controlled by drying, salting, or freezing.
Halal	Arabic term which means permissible or lawful in islam. in reference to food, it is the dietary standard, as prescribed in the sharia'ah (islamic law).
Seaweeds	Marine algae that grow in the ocean come in various colors such as green, red and brown, and are known for their nutritional benefits and various uses in food, cosmetics, and other products.
Halal Standard	Ingredients and other materials or utensils used are in accordance with Islamic laws.
Corporate Social Responsibility	Compliance with laws and regulations
Seaweeds products	Items made from seaweed, such as food, supplements, cosmetics, and industrial materials, utilizing its natural properties for various purposes.
Extraction of seaweeds	Process of obtaining valuable substances or components from seaweeds for various applications
Personal hygiene	Clean up and ensure worker involved in cleaning wash their hands and any exposed skin thoroughly after the cleaning process.
Rinsing utensils	Rinse the utensils thoroughly with clean water to remove all cleaning agents and residues.

Food and Drugs Administration (FDA)	The agency is responsible for licensing, monitoring, and regulation of cosmetics, drugs, foods, household hazardous products, medical devices and electromagnetic radiation emitting devices, pesticides, tobacco and related products, and vaccines for safety, efficacy, and quality in the Republic of the Philippines.
Good Manufacturing Practices (GMP)	Aspect of quality assurance that ensures that medicinal products are consistently produced and controlled to the quality standards appropriate to their intended use and as required by the product specification
Najis	An Arabic term which means filth or unclean such as: a. those that are themselves not permissible such as swine and all its derivatives, blood and carrion; b. halal food that is contaminated with najis; c. halal food that comes into direct contact with things that are non-halal; d. any liquid and objects discharged from orifices of human beings or animals such as urine, excrement, blood, vomit, pus, sperm and ova of pigs and dogs except sperm and ova of lawful animals e. carrion or halal animals that are not slaughtered according to Islamic (shariah) law.
Al Dente noodles	Refers to the texture of the pasta that should be tender but firm and chewy.
Raw dried seaweeds	RDS are the typical output of seaweed farmers. These are the seaweeds that are subjected to drying before trading in the market. These are primarily used for extracting carrageenan, thereby making it the main requirement of the carrageenan processing plants.[1]

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[1] National Seaweed Industry Roadmap 2022 – 2026. Department of Agriculture, Bureau of Fisheries and Aquatic Resources

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