

COMPETENCY STANDARDS

HALAL FOOD PROCESSING (HALAL MEAT PROCESSING) LEVEL II



PROCESSED FOOD AND BEVERAGES SECTOR

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY

East Service Road, South Luzon Expressway (SLEX), Taguig City, Metro Manila

- 2 Registration and delivery of training programs; and
- 3 Development of curriculum and assessment instruments

Each CS has two sections:

- Section 1 **Definition of Competency Standards** - refers to the group of competencies that describes the different functions of the qualifications.
- Section 2 **The Competency Standards** - gives the specifications of competencies required for effective work performance.

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COMPETENCY STANDARDS FOR HALAL FOOD PROCESSING (HALAL MEAT PROCESSING) LEVEL II

SECTION 1 DEFINITION OF QUALIFICATION

The **HALAL FOOD PROCESSING (HALAL MEAT PROCESSING) LEVEL II** consists of competencies that a person must achieve in performing the different meat processing.

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
PFB751212	Perform mathematical computation
PFB751213	Implement good manufacturing practice procedure
PFB751214	Implement environmental policies and procedures

UNIT CODE	CORE COMPETENCIES
CS-PFB334301	Perform Pre-Halal Meat Processing Activities
CS-PFB334302	Process Halal Ground Meat
CS-PFB334303	Process Halal Meat by Marination
CS-PFB334304	Process Halal Meat by Injection
CS-PFB334305	Process Halal Meat by Emulsification

A person who has achieved this Qualification is competent to be a:

- Meat Processor

SECTION 2 COMPETENCY STANDARDS

This section details the contents of the basic, common and core units of competency required in **HALAL FOOD PROCESSING (HALAL MEAT PROCESSING) LEVEL II**

BASIC COMPETENCIES

UNIT OF COMPETENCY : PARTICIPATE 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 <i>Italicized terms</i> 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	1.1 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 Following simple spoken language 1.2 Performing routine workplace duties following simple written notices 1.3 Participating in workplace meetings and discussions 1.4 Preparing work-related documents 1.5 Estimating, calculating and recording routine workplace measures 1.6 Relating/ Interacting with people of various levels in the workplace 1.7 Gathering and providing basic information in response to workplace requirements 1.8 Basic business

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	1.7 Personal interaction is carried out clearly and concisely		writing skills 1.9 Interpersonal skills in the workplace 2.0 Active-listening skills
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 is followed based on established procedures 2.3 Feedback is given to workplace supervisor based on 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	2.1 Effective verbal and non-verbal communication 2.2 Different modes of communication 2.3 Medium of 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	2.1 Following simple spoken instructions 2.2 Performing routine workplace duties following simple written 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/querying 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	3.1 Effective verbal and non-verbal communication 3.2 Different modes of communication	3.1 Completing work-related documents 3.2 Applying operations of addition,

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	<p>accurately and legibly</p> <p>3.2 Workplace data is recorded on standard workplace forms and documents</p> <p>3.3 Errors in recording information on forms/ documents are identified and acted upon</p> <p>3.4 Reporting requirements to supervisor are completed according to organizational guidelines</p>	<p>3.3 Workplace forms and documents</p> <p>3.4 Organizational/ Workplace policies</p> <p>3.5 Communication procedures and systems</p> <p>3.6 Technology relevant to the enterprise and the individual's work responsibilities</p>	<p>subtraction, division and multiplication</p> <p>3.3 Gathering and providing information in response to workplace requirements</p> <p>3.4 Effective record keeping skills</p>

RANGE OF VARIABLES

VARIABLES	RANGE
1. Appropriate sources	<p>May include:</p> <p>1.1 Team members</p> <p>1.2 Supervisor/Department Head</p> <p>1.3 Suppliers</p> <p>1.4 Trade personnel</p> <p>1.5 Local government</p> <p>1.6 Industry bodies</p>
2. Medium	<p>May include:</p> <p>2.1. Memorandum</p> <p>2.2. Circular</p> <p>2.3. Notice</p> <p>2.4. Information dissemination</p> <p>2.5. Follow-up or verbal instructions</p> <p>2.6. Face-to-face communication</p> <p>2.7. Electronic media (disk files, cyberspace)</p>
3. Storage	<p>May include:</p> <p>3.1. Manual filing system</p> <p>3.2. Computer-based filing system</p>

4. Workplace interactions	<p>May include:</p> <ul style="list-style-type: none"> 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	<p>May include:</p> <ul style="list-style-type: none"> 5.1. HR/Personnel forms, telephone message forms, safety reports

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 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	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> 2.1. Fax machine 2.2. Telephone 2.3. Notebook 2.4. Writing materials 2.5. Computer with Internet connection
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> 3.1. Demonstration with oral questioning 3.2. Interview 3.3. Written test 3.4. Third-party report
4. Context for Assessment	<ul style="list-style-type: none"> 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 <i>Italicized terms</i> 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
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	2.1 Team roles and objectives 2.2 Team structure and parameters 2.3 Team development 2.4 Sources of information	2.1 Communicating with others, appropriately consistent with the culture of the workplace 2.2 Developing ways in improving work structure and performing respective roles in the group or organization

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	team discussions and appropriate external sources		
4. Work as a team member	<p>3.1 Effective and appropriate forms of communications are used and interactions undertaken with team members based on company practices.</p> <p>3.2 Effective and appropriate contributions made to complement team activities and objectives, based on <i>workplace context</i></p> <p>3.3 Protocols in reporting are observed based on standard company practices.</p> <p>3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives</p>	<p>3.1 Communication Process</p> <p>3.2 Workplace communication protocol</p> <p>3.3 Team planning and decision making</p> <p>3.4 Team thinking</p> <p>3.5 Team roles</p> <p>3.6 Process of team development</p> <p>3.7 Workplace context</p>	<p>3.1 Communicating appropriately, consistent with the culture of the workplace</p> <p>3.2 Interacting effectively with others</p> <p>3.3 Deciding as an individual and as a group using group think strategies and techniques</p> <p>3.4 Contributing to Resolution of issues and concerns</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Role and objective of team	May include: 1.1. Work activities in a team environment with enterprise or specific sector 1.2. Limited discretion, initiative and judgement maybe demonstrated on the job, either individually or in a team environment
2. Sources of information	May include: 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: 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

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 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
<p>2. Resource Implications</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> 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
<p>3. Methods of Assessment</p>	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> 3.1. Role play involving the participation of individual member to the attainment of organizational goal 3.3. Case studies and scenarios as a basis for discussion of issues and strategies in teamwork 3.4 Socio-drama and socio-metric methods 3.5 Sensitivity techniques 3.6 Written Test
<p>4. Context for Assessment</p>	<ul style="list-style-type: none"> 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 <i>Italicized terms</i> 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 helpdesk 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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Look for solutions to routine problems	2.1 Potential solutions to problem is identified 2.2 Recommendations about possible solutions are developed, documented , ranked and presented to appropriate person for decision	2.1 Current industry hardware and software products and services 2.2 Industry service and helpdesk practices, processes and procedures 2.3 Operating systems 2.4 Industry standard diagnostic tools 2.5 Malfunctions and resolutions. 2.6 Root cause analysis	2.1 Identifying current industry hardware and software products and services 2.2 Identifying services and helpdesk practices, processes and procedures. 2.3 Identifying operating system 2.4 Identifying current industry standard diagnostic tools 2.5 Describing common malfunctions and resolutions. 2.6 Determining the root cause of a routine malfunction

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Recommend solutions to problems	3.1 Implementation of solutions are planned 3.2 Evaluation of implemented solutions are planned 3.3 Recommended solutions are documented and submit to appropriate person for confirmation	3.1 Standard procedures 3.2 Documentation produce	3.1 Producing documentation that recommends solutions to problems 3.2 Following established procedures

RANGE OF VARIABLES

VARIABLE	RANGE
1. Problems/Procedural Problem	May include: 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: 2.1 Supervisor or manager 2.2 Peers/work colleagues 2.3 Other members of the organization
3. Document	May include: 3.1 Electronic mail 3.2 Briefing notes 3.3 Written report 3.4 Evaluation report
4. Plan	May include: 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

	<p>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.</p>
4. Context for Assessment	<p>4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.</p>

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.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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 in 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 situation 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 goals 1.3 Showing confidence, and resilience in the face of setbacks and frustrations and other negative emotions and unpleasant situations in the workplace

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
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: 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: 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 <i>Italicized terms</i> 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 own area of work 1.2 Information are 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. 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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Discuss and develop ideas with others	2.1 <i>People who could provide input</i> 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 <i>Critical inquiry method</i> 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 Communicating ideas for change through small group discussions and meetings.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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. Involvement. 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

VARIABLES	RANGE
1. Opportunities for improvement	May include: 1.1 Systems. 1.2 Processes. 1.3 Procedures. 1.4 Protocols. 1.5 Codes. 1.6 Practices.
2. Information	May include: 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: 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	<p>May include:</p> <ul style="list-style-type: none"> 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.
5. Reporting skills	<p>May include:</p> <ul style="list-style-type: none"> 5.1 Data management. 5.2 Coding. 5.3 Data analysis and interpretation. 5.4 Coherent writing. 5.5 Speaking.

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Identified opportunities to do things better. 1.2 Discussed and developed ideas with others on how to contribute to workplace innovation. 1.3 Integrated ideas for change in the workplace. 1.4 Analyzed and reported rooms for innovation and learning in the workplace.
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> 2.1 Pens, papers and writing implements. 2.2 Cartolina. 2.3 Manila papers.

3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <p>3.1 Psychological and behavioral Interviews.</p> <p>3.2 Performance Evaluation.</p> <p>3.3 Life Narrative Inquiry.</p> <p>3.4 Review of portfolios of evidence and third-party workplace reports of on-the-job performance.</p> <p>3.5 Sensitivity analysis.</p> <p>3.6 Organizational analysis.</p> <p>3.7 Standardized assessment of character strengths and virtues applied.</p>
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 : PRESENT RELEVANT INFORMATION

UNIT CODE : 400311215

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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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 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 audiences 2.4 Stating legislation, policy and procedures relating to the conduct of evaluations 2.5 Stating organizational values, ethics and codes of conduct

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Record and present information	3.1 Studied data/information are recorded. 3.2 Recommendations is 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

VARIABLES	RANGE
1. Data analysis techniques	May include: 1.1. Domain analysis 1.2. Content analysis 1.3. Comparison technique

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Determine data / information 1.2 Studied and applied gathered data/information 1.3 Recorded and studied data/information</p> <p>These aspects may be best assessed using a range of scenarios what ifs 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.</p>
2. Resource Implications	<p>Specific resources for assessment</p> <p>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.</p>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <p>3.1. Written Test 3.2. Interview 3.3. Portfolio</p> <p>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.</p>
4. Context for Assessment	<p>4.1. In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.</p>

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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify OSH compliance requirements	1.1 Relevant <i>OSH requirements, regulations, policies and procedures</i> are identified in accordance with workplace policies and procedures 1.2 OSH activity nonconformities are conveyed to <i>appropriate personnel</i> 1.3 OSH <i>preventive and control requirements</i> 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 Prevention and Control 1.4. General OSH principles 1.5. Work standards and procedures 1.6. Safe handling procedures of tools, equipment and materials 1.7. Standard emergency plan and procedures in the workplace	1.1 Communication skills 1.2. Interpersonal skills 1.3. Critical thinking skills 1.4. Observation skills

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Prepare OSH requirements for compliance	<p>2.1 OSH work activity material, tools and equipment requirements are identified in accordance with workplace policies and procedures</p> <p>2.2. Required OSH materials, tools and equipment are acquired in accordance with workplace policies and procedures</p> <p>2.3. Required OSH materials, tools and equipment are arranged/ placed in accordance with OSH work standards</p>	<p>2.1. Resources necessary to execute hierarchy of controls</p> <p>2.2. General OSH principles</p> <p>2.3. Work standards and procedures</p> <p>2.4. Safe handling procedures of tools, equipment and materials</p> <p>2.5. Different OSH control measures</p>	<p>2.1. Communication skills</p> <p>2.2. Estimation skills</p> <p>2.3. Interpersonal skills</p> <p>2.4. Critical thinking skills</p> <p>2.5. Observation skills</p> <p>2.6. Material, tool and equipment identification skills</p>

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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 3.3 Non-compliance work activities are reported to <i>appropriate personnel</i>	3.1. OSH work standards 3.2. Industry related work activities 3.3. General OSH principles 3.4. OSH Violations Non-compliance work activities	3.1 Communication skills 3.3 Interpersonal skills 3.4 Troubleshooting skills 3.5 Critical thinking skills 3.6 Observation skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. OSH Requirements, Regulations, Policies and Procedures	May include: 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: 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: 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

	<p>4.9 Machine Guarding</p> <p>4.10 Electrical General Requirements</p> <p>4.11 Asbestos work requirements</p> <p>4.12 Excavations work requirements</p>
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EVIDENCE GUIDE

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

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

UNIT CODE : 400311217

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required 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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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 Procedures 1.3. Waste Minimization 1.4. Efficient Energy Consumptions	1.1 Recording Skills 1.2 Writing Skills 1.3 Innovation Skills

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	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 Reasoning Skills 2.2 Critical thinking 2.3 Problem Solving 2.4 Observation Skills

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Convey inefficient and ineffective environmental practices	3.1 Efficiency and effectiveness of resource utilization are reported to <i>appropriate personnel</i> 3.2 Concerns related resource utilization is 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 Environmental Awareness

RANGE OF VARIABLES

VARIABLE	RANGE
1. Environmental Work Procedures	May include: 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: 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 : EXERCISE EFFICIENT AND EFFECTIVE SUSTAINABLE PRACTICES IN THE WORKPLACE

UNIT CODE : 400311217

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required 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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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 is applied based on industry standards.	1.1 Workplace best practices, policies and criteria 1.2 Resource utilization 1.3 Ways in fostering entrepreneurial attitudes: <ul style="list-style-type: none"> • Patience • Honesty • Quality consciousness • Safety consciousness • Resourcefulness 	1.1 Communication skills 1.2 Complying with quality procedures

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
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: <ul style="list-style-type: none"> • Patience • Honesty • Quality consciousness • Safety consciousness • Resourcefulness 	2.1 Communication skills 2.2 Complying with quality procedures 2.3 Following workplace communication protocol

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Implement cost-effective operations	<p>3.1 Preservation and optimization of workplace resources is implemented in accordance with enterprise policy</p> <p>3.2 Judicious use of workplace tools, equipment and materials are observed according to manual and work requirements.</p> <p>3.3 Constructive contributions to office operations are made according to enterprise requirements.</p> <p>3.4 Ability to work within one's allotted time and finances is sustained.</p>	<p>3.1 Optimization of workplace resources</p> <p>3.2 5S procedures and concepts</p> <p>3.3 Criteria for cost-effectiveness</p> <p>3.4 Workplace productivity</p> <p>3.5 Impact of entrepreneurial mindset to workplace productivity</p> <p>3.6 Ways in fostering entrepreneurial attitudes:</p> <ul style="list-style-type: none"> • Quality consciousness • Safety consciousness 	<p>3.1 Implementing preservation and optimizing workplace resources</p> <p>3.2 Observing judicious use of workplace tools, equipment and materials</p> <p>3.3 Making constructive contributions to office operations</p> <p>3.4 Sustaining ability to work within allotted time and finances</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Good practices	<p>May include:</p> <p>1.1 Economy in use of resources</p> <p>1.2 Documentation of quality practices</p>
2. Resources utilization	<p>May include:</p> <p>2.1 Consumption/ use of consumables</p> <p>2.2 Use/Maintenance of assigned equipment and furniture</p> <p>2.3 Optimum use of allotted /available time</p>

EVIDENCE GUIDE

<p>1. Critical aspects of competency</p>	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Demonstrated ability to identify and sustain cost-effective activities in the workplace</p> <p>1.2 Demonstrated ability to practice entrepreneurial knowledge, skills and attitudes in the workplace.</p>
<p>2. Resource Implications</p>	<p>The following resources should be provided:</p> <p>2.1 Simulated or actual workplace</p> <p>2.2 Tools, materials and supplies needed to demonstrate the required tasks</p> <p>2.3 References and manuals</p> <p>2.3.1 Enterprise procedures manuals</p> <p>2.3.2 Company quality policy</p>
<p>3. Methods of Assessment</p>	<p>Competency in this unit should be assessed through:</p> <p>3.1 Interview</p> <p>3.2 Third-party report</p>
<p>4.Context of Assessment</p>	<p>4.1 Competency may be assessed in workplace or in a simulated workplace setting</p> <p>4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group</p>

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

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Wear personal protective equipment	1.1 Personal protective equipment are checked according to <i>manufacturer's specifications</i> 1.2 <i>Personal protective equipment (PPE)</i> are worn according to the job requirement	<ul style="list-style-type: none"> • Personal protective equipment (PPE) • Procedures in wearing in PPE • Good Food Manufacturing Practices • Parts and functions of personal protective equipment 	<ul style="list-style-type: none"> • Checking PPE • Practicing GMP
2. Observe personal hygiene and good grooming	2.1 Personal hygiene and good grooming is practiced in line with <i>workplace health and safety requirements</i>	<ul style="list-style-type: none"> • Good grooming and personal hygiene • Workplace health and safety requirements 	<ul style="list-style-type: none"> • Practicing good grooming and personal hygiene practices
3. Implement food sanitation practices	3.1 Sanitary food handling practices are implemented in line with workplace sanitation regulations 3.2 Safety measures are observed in line with workplace safety practices.	<ul style="list-style-type: none"> • Proper waste disposal • Environmental protection and concerns • Food safety principles and practices • TQM and other food quality system principles 	<ul style="list-style-type: none"> • Managing wastes • Implementing sanitary food handling practices • Practicing workplace safety

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	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.	<ul style="list-style-type: none"> • Safety measures • First aid procedures • Parts and functions of personal protective equipment • First Aid Kit 	<ul style="list-style-type: none"> • Applying safety measures • Applying first aid treatment • Practicing PPE • 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	<ul style="list-style-type: none"> • Hazards in work area • Waste disposal • Housekeeping / 7's • Proper waste disposal 	<ul style="list-style-type: none"> • Implementing housekeeping activities • Practicing proper waste disposal • Coordination skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Manufacturer's specifications	May include: 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(PPE)	May include: 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: 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: 4.1 Labeling of chemicals and other sanitizing agents 4.2 Installation of firefighting equipment in the work area 4.3 Installation of safety signages 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: 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: 6.1 Physical 6.2 Biological 6.3 Chemical

EVIDENCE GUIDE

<p>1. Critical aspects of competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 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
<p>2. Resource implications</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> 2.1 Work area/station 2.2 First Aid kit 2.3 PPE relevant to the activities 2.4 Fire extinguisher 2.5 Stretcher 2.6 Materials, tools and equipment relevant to the unit of competency
<p>3. Method of assessment</p>	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> 3.1 A combination of direct observation and questioning of a candidate processing foods.
<p>4. Context of assessment</p>	<ul style="list-style-type: none"> 4.1 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.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify standard measuring devices and instruments	1.1 <i>Standard measuring devices and instruments</i> are identified according to manufacturer's specifications 1.2 Devices and instruments for measuring are properly checked, sanitized and calibrated prior to use	<ul style="list-style-type: none"> • Safe handling of measuring devices and instruments • Specifications and functions of measuring devices and instruments • Defects and breakages of measuring devices and instruments • Procedures in sanitizing and calibrating and stowing equipment and instruments 	<ul style="list-style-type: none"> • Communication skills • Sanitary handling of devices and instruments • Calibrating skills
2. Review the procedures in using standard Measuring devices and instruments	2.1 Procedures in using the <i>standard measuring devices</i> and instruments are recalled according to manufacturer's specifications 2.2 Printed procedures/ brochures/ catalogues are consulted according to specified <i>food processing methods</i>	<ul style="list-style-type: none"> • Procedures in using different standard measuring devices • Different food processing methods 	<ul style="list-style-type: none"> • Reading and following printed manuals and brochures • Using standard measuring devices

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Follow procedures of using measuring devices and instruments	<p>3.1 Methods/practices of using measuring devices and instruments are strictly observed according to manufacturer's specifications and workplace requirements</p> <p>3.2 Measuring devices and instruments are cleaned, wiped dry and stowed after use to ensure conformity with workplace requirements</p>	<ul style="list-style-type: none"> • Methods/practice of using measuring devices and instruments • Procedures in cleaning, and stowing equipment and instruments 	<ul style="list-style-type: none"> • Applying methods/practices in using measuring devices and instruments • Cleaning and stowing measuring devices and instruments

RANGE OF VARIABLES

VARIABLE	RANGE
1. Standard measuring devices	<p>May include:</p> <p>1.1 Weighing scales and balances of various capacities and sensitivities</p> <p>1.2 Measuring cups of varying capacities for dry ingredients</p> <p>1.3 Measuring cups of varying capacities for liquid ingredients</p>
2. Standard Measuring Instruments	<p>May include:</p> <p>2.1 Salinometer</p> <p>2.2 Thermometers of varying temperature range (0-300 C)</p> <p>2.2.1 Refractometer of varying range (0 – 90 B)</p> <p>2.2.2 Glasswares like cylinders, beakers, flasks) of varying graduations</p>
3. Food Processing Methods	<p>May include:</p> <p>3.1 Process foods by Salting, Curing and Smoking</p> <p>3.2 Process foods by Fermentation and Pickling</p> <p>3.3 Process foods by Canning and Bottling</p> <p>3.4 Process foods by Sugar Concentration</p> <p>3.5 Process foods by Drying and Dehydration</p>

EVIDENCE GUIDE

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Identified, prepared and calibrated standard measuring devices and instruments</p> <p>1.2 Followed correctly the procedures in using standard measuring devices and instruments</p> <p>1.3 Followed proper cleaning and sanitizing and stowing procedures of measuring devices and equipment before and after use</p>
2. Resource implications	<p>The following resources should be provided:</p> <p>2.1 Work area/station</p> <p>2.2 Materials, tools and equipment relevant to the Unit of Competency</p>
3. Method of assessment	<p>Competency in this unit may be assessed through:</p>

	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.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Gather and Tabulate the Recorded Data	1.1 Records of <i>weights and measurements</i> 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	<ul style="list-style-type: none"> • Data gathering • Record keeping • Data summary and analysis • Basic Mathematical Operations 	<ul style="list-style-type: none"> • Gathering data • Keeping of records • Summarizing and analyzing data • Basic Mathematical skills • Basic Accounting skills
2. Review the Various Formulations	2.1 Raw materials and ingredients and percentage formulations are checked/counter checked according to approved specifications and enterprise requirements 2.2 Finished products and percentage formulations are reviewed according to approved specifications and enterprise requirements	<ul style="list-style-type: none"> • Percentages and formulations of raw materials and ingredient and finished products • Procedures in checking raw materials and finished products formulation and percentages • Basic Mathematical Operations 	<ul style="list-style-type: none"> • Checking percentages formulations of raw materials and ingredient • Reviewing percentages and formulations of finished products • Numeracy skills

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	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	<ul style="list-style-type: none"> • Record keeping • Mensuration • Fraction, ratios and proportions • Basic Mathematical Operations • Conversion factors • Percentage formulation 	<ul style="list-style-type: none"> • Basic Mathematical skills • Recording skills
4. Compute Production Cost	4.1 Costs of production are computed according to organization's standard procedures 4.2 Computed costs of production are reviewed and validated according to organization's production requirements	<ul style="list-style-type: none"> • Cost of production • Validation procedures for computer costs • Basic Mathematical Operations 	<ul style="list-style-type: none"> • Basic Mathematical skills • Basic Accounting skills • Reviewing and validating computed costs

RANGE OF VARIABLES

VARIABLE	RANGE
1. Weights and measurements	May include: 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 production	May include: 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 2.3 Computer with printer and software 2.4 Calculator 2.5 Work table
3. Methods 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

	3.2 Submission of a written report showing a record of production data including raw data
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.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> 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	<ul style="list-style-type: none"> • GMP Requirements • GMP Codes of practice, policies and procedures • GMP Role of internal and external auditors • Contamination events and performance improvement processes procedures • Personal clothing and footwear requirements at work areas • Use of personal clothing, storage and disposal requirements • Micro biological, physical and chemical contaminants • Basic concepts of quality assurance • Control methods and procedures used in GMP: • GMP responsibilities and requirements relating to work role 	<ul style="list-style-type: none"> • Planning and organizing work (time management) • Working with others and in teams • Practicing GMP • Following contamination investigation procedures

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		<ul style="list-style-type: none"> • Basic properties, handling and storage requirements of raw materials, packaging components and final product • Standards for materials, equipment and utensils used in the work area • Recall and traceability procedures relevant to work role • Procedures for identifying or isolating materials or product of unacceptable quality • Record keeping and the recording requirements of GMP. 	
2. Observe personal hygiene and conduct to meet GMP requirements	<p>2.1. Personal hygiene meets GMP requirements</p> <p>2.2. Clothing is prepared, used, stored and disposed of according to GMP and workplace procedures</p> <p>2.3. Personal movement around the workplace complies with area entry and exit procedures</p>	<ul style="list-style-type: none"> • Workplace entry and exit procedures • Personal hygiene • PPE 	<ul style="list-style-type: none"> • Following workplace entry and exit procedures • Practicing OSHS • Practicing GMP

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
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 3.5. 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	<ul style="list-style-type: none"> • Monitoring methods of work area, materials and equipment • Handling of raw materials, packaging components and product • Control resource allocation and processes in the workplace • Contaminants • Good Manufacturing Practices (GMP) 	<ul style="list-style-type: none"> • Identifying GMP requirements • Monitoring routinely of work area, materials equipment and product • Handling of raw materials, packaging components and product • Maintaining cleanliness in the workplace

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
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	<ul style="list-style-type: none"> • Non-compliance and corrective action in GMP • Corrective actions 	<ul style="list-style-type: none"> • Practicing GMP • Reporting workplace condition • 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	<ul style="list-style-type: none"> • Validation procedures in GMP • Issues arising from validation • Documentation of validation procedures 	<ul style="list-style-type: none"> • Following validation procedures • Reporting issues arising from validation • 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 <i>workplace reporting procedures</i> to meet GMP requirements	<ul style="list-style-type: none"> • Documentation and workplace reporting procedures in GMP • Information and workplace reporting procedures 	<ul style="list-style-type: none"> • Keeping records • Recording information

RANGE OF VARIABLES

VARIABLE	RANGE
1. OH&S requirements	May include: 1.1. OH&S legal requirements 1.2. Enterprise OH&S policies, procedures and programs
2. Work is carried out in accordance with regulatory requirements	May include: 2.1. Relevant regulations regarding food processing and food safety regulations 2.2. Department of Health – Food Establishments – Code of Sanitation of the Philippines (P.D.856) 2.3. Environment Management Bureau regulations regarding emissions, waste treatment, noise and effluent treatment and control
3. Hygiene and sanitation requirements	May include: 3.1. Department of Health – Food Establishments – Code of Sanitation of the Philippines (P.D.856) 3.2. Requirements set out by Bureau of Food and Drugs 3.3. Workplace requirements
4. Workplace requirements	May include: 4.1. Work instructions 4.2. Standard operating procedures 4.3. OH&S requirements 4.4. Quality assurance requirements 4.5. Equipment manufacturers’ advice 4.6. Material Safety Data Sheets 4.7. Codes of Practice and related advice
5. Products	May include: 5.1 Raw materials 5.2 Packaging components and consumables 5.3 Part-processed product 5.4 Finished product 5.5 Cleaning materials
6. Responsibility and reporting systems	May include: 6.1. Responsibility for applying Good Manufacturing Practice relates to the person’s work area 6.2. Reporting systems may include electronic and manual data recording and storage systems

EVIDENCE GUIDE

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidences that the candidate :</p> <ul style="list-style-type: none"> 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
<p>2. Resource Implication</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> 2.1 Workplace location and access to workplace policies 2.2 Materials relevant to the proposed activity and tasks
<p>3. Methods of Assessment</p>	<p>Competency in this unit must be assessed using at least two (2) of the following methods:</p> <ul style="list-style-type: none"> 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 <i>Italicized terms are elaborated in the Range of Variables</i>	REQUIRED KNOWLEDGE	REQUIRED SKILLS
<p>1. Conduct work in accordance with environmental policies and procedures</p>	<p>1.1. Immediate work area is routinely checked to ensure compliance with environmental requirements</p> <p>1.2. Hazards and unacceptable performance are identified, removed and/or reported to appropriate personnel according to workplace procedures</p> <p>1.3. Workplace procedures and work instructions are followed</p> <p>1.4. Where control requirements are not met, incidents are promptly reported and corrective action is taken</p> <p>1.5. Measures used to minimize and handle waste are followed</p> <p>1.6. Environmental data is recorded in required format according to workplace reporting requirements</p>	<ul style="list-style-type: none"> • Workplace approach to managing environmental issues • Responsibilities of self and employer to manage environmental issues on site • Sources of advice on environmental issues in the workplace • Environmental hazards and risks associated with the work • Work procedures as they relate to environmental responsibilities • Procedures used to prevent or control environmental risks associated with own work • Basic concepts of hazard identification, risk assessment and control options • Identifying and responding to hazards • Impact of work practices on 	<ul style="list-style-type: none"> • Planning and organizing work (time management) • Working with others and in teams • Practicing environmental skills

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms are elaborated in the Range of Variables</i>	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		resource utilization and wastage <ul style="list-style-type: none"> • Procedures used to handle and dispose of waste • The difference between trade waste and storm water drains • Consequences of inappropriate waste handling and disposal • Procedures for responding to unplanned incidents such as spills and leaks • Emergency response system and procedures • Responsible use of resources in own work area • Reporting procedures and responsibilities • 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	<ul style="list-style-type: none"> • Unacceptable environmental outcomes • Corrective actions • Emergency response plan • Improvement in environmental practices • Report preparation 	<ul style="list-style-type: none"> • Identifying and reporting unacceptable environmental outcomes • Implementing corrective actions • Participating in improvement of environmental practices

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms are elaborated in the Range of Variables</i>	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	<p>environmental management and emergency response plans as required.</p> <p>2.3 Contributions are made to participative arrangements for managing environmental issues in the workplace within workplace procedures and level of responsibility.</p>		<ul style="list-style-type: none"> • Practicing written communication skills
<p>3. Respond to an environmental emergency</p>	<p>3.1 Emergency situations are identified and reported according to workplace reporting requirements</p> <p>3.2 Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures</p>	<ul style="list-style-type: none"> • Emergency situations • Emergency procedures 	<ul style="list-style-type: none"> • Identifying emergency situations • Following emergency procedures • Practicing written communication skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. OH&S requirements	<p>May include:</p> <ul style="list-style-type: none"> 1.1. OH&S legal requirements 1.2. Enterprise OH&S policies, procedures and programs
2. Work is carried out in accordance with regulatory requirements	<p>May include:</p> <ul style="list-style-type: none"> 2.1. Relevant regulations regarding food processing and food safety regulations 2.2. Department of Health – Food Establishments – Code of Sanitation of the Philippines (P.D.856) 2.3. Environment Management Bureau regulations regarding emissions, waste treatment, noise and effluent treatment and control
3. Hygiene and sanitation requirements	<p>May include:</p> <ul style="list-style-type: none"> 3.1. Department of Health – Food Establishments – Code of Sanitation of the Philippines (P.D.856) 3.2. Requirements set out by Bureau of Food and Drugs 3.3. Workplace requirements
4. Workplace requirements	<p>May include:</p> <ul style="list-style-type: none"> 4.1. Work instructions 4.2. Standard operating procedures 4.3. OH&S requirements 4.4. Quality assurance requirements 4.5. Equipment manufacturers’ advice 4.6. Material Safety Data Sheets 4.7. Codes of Practice and related advice
5. Identification and control of hazards	<p>May include:</p> <ul style="list-style-type: none"> 5.1. Procedures are available that outline appropriate response to environmental incidents, accidents and emergencies 5.2. At this level identification and control of environmental hazards relates to own work. Corrective action typically involves recognizing any event which occurs as part of the work process and presents an unacceptable environmental risk or outcome, taking corrective action within level of responsibility, and/or reporting to the appropriate person in the work area 5.3. Work responsibilities may involve handling of hazardous waste 5.4. An environmental hazard is any activity, product or service that has the potential to affect the environment. This may also be referred to as an environmental aspect 5.5. An environmental risk is the likelihood that the hazard can cause harm to the environment 5.6. A control measure is a method or procedure used to prevent or minimize environmental risks

VARIABLE	RANGE
	5.7. Responsibility for identifying and controlling environmental risks relates to immediate work responsibilities 5.8. Participating in improvement may involve participation in structured improvement programs, one-off projects and day-to-day problem solving and consultative groups

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidences that the candidate :</p> 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	<p>The following resources should be provided:</p> 2.1 Workplace location and access to workplace policies 2.2 Materials relevant to the proposed activity and tasks
3. Methods of Assessment	<p>Competency in this unit must be assessed using at least two (2) of the following methods:</p> 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 PRE- HALAL MEAT PROCESSING ACTIVITIES**

UNIT CODE : **CS-PFB751307**

UNIT DESCRIPTOR : This unit covers with the knowledge, skills and attitude required to prepare tools, equipment, utensils, PPE, meat and non-meat ingredients.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Apply hygiene and sanitation for personnel	1.1 <i>Obligatory cleansing</i> is performed in accordance with Islamic Law 1.2 Wearing of <i>Personal Protective Equipment</i> (PPE) is performed in accordance with workplace requirements. 1.3 <i>Proper handwashing</i> is performed during processing in accordance with workplace requirements. 1.4 <i>Types of food contamination</i> is identified and addressed in accordance with workplace requirements.	SCIENCE 1.1 Proper Handwashing 1.2 Types of food contaminants TECHNOLOGY 1.3 Halal cleansing techniques 1.4 Techniques on proper handwashing COMMUNICATION 1.5 Hygiene and Sanitation such as proper handwashing according to Good Manufacturing Practices (GMP) LAW 1.6 Cleansing according to Islamic law. 1.7 Occupational Safety and Health Standards (OSHS) on wearing PPEs	1.1 Demonstrating Halal cleansing 1.2 Demonstrating Proper handwashing 1.3 Practicing OHS program on wearing of exclusive and dedicated Halal PPE 1.4 Identifying types of contamination
2. Prepare exclusive and dedicated Halal tools, equipment, utensils	2.1 <i>Exclusive and dedicated Halal tools, equipment and utensils</i> are prepared in accordance with	COMMUNICATION 2.1 Cleansing in compliance to Islamic Law for tools, equipment and utensils	2.1 Accomplishing forms and checklist of tools, equipment and utensils

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
utensils and processing area	<p>workplace requirements.</p> <p>2.2 Exclusive and dedicated Halal equipment for meat processing is checked in accordance with manufacturers specification</p> <p>2.3 Cleaning and sanitizing of exclusive and dedicated Halal tools, equipment, utensils and processing area are performed based on workplace requirements.</p> <p>2.4 Halal cleansing is performed for exclusive and dedicated Halal tools, equipment and utensils that was:</p> <p>2.4.1 in contact with non-halal materials</p> <p>2.4.2 exposed and used outside the food plant</p>	<p>2.2 Operations manual for list of exclusive and dedicated Halal tools, equipment and utensils for meat processing</p> <p>2.3 Sanitation Standard Operating Procedures (SSOP) on cleaning and sanitizing</p> <p>LAW</p> <p>2.4 Occupational Safety and Health Standards (OSHS) in handling tools, equipment and utensils</p> <p>2.5 Act Strengthening Compliance with Occupational Safety and Health Standards and Providing Penalties for Violations thereof (RA 11058)</p> <p>2.6 Code on Sanitation (PD 856) on cleaning and sanitizing</p>	<p>2.2 Practicing OSHS in handling exclusive and dedicated Halal tools, equipment and utensils.</p> <p>2.3 Demonstrating halal cleansing</p> <p>2.4 Demonstrating cleaning and sanitizing of exclusive and dedicated Halal tools, equipment, utensils and processing area</p>
3. Prepare meat	<p>3.1 Meats are prepared in accordance with the following established procedures.</p> <p>3.2 Exclusive and dedicated Halal equipment are used in accordance with manufacturer’s manual</p>	<p>SCIENCE</p> <p>3.1 Thawing of meat</p> <p>TECHNOLOGY</p> <p>3.2 Operation of equipment:</p> <p>3.2.1 Meat Grinder</p> <p>3.2.2 Meat Slicer</p> <p>ENVIRONMENT</p> <p>3.3 Proper disposal of waste materials</p> <p>COMMUNICATION</p> <p>3.4 Work Instruction</p> <p>3.5 Operations Manual for Equipment</p>	<p>3.1 Accomplishing forms and checklist for meat</p> <p>3.2 Practicing OSHS in:</p> <p>3.2.1 Operating equipment</p> <p>3.2.2 Handling tools and utensils.</p> <p>3.3 Applying hygiene and sanitation practices in handling meat.</p>

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		3.6 Hygiene and sanitation practices based on GMP in meat handling LAW 3.7 OSHS on handling of tools, equipment and utensils 3.8 Guidelines on Meat Handling based on Islamic Law 3.9 RA 11058 3.10 PD 856	
4. Prepare Halal non-meat ingredients	4.1 Preparation of Halal non-meat ingredients is performed as instructed by supervisor 4.2 Mixing of <i>pre-weighed Halal ingredients</i> is performed in accordance with workplace requirement 4.3 Mixed Halal ingredients are properly packed and labeled for processing in compliance with workplace requirement. 4.4 Handling of Halal non-meat ingredients is followed in accordance with Islamic Law	SCIENCE 4.1 Halal non-meat ingredients for meat processing 4.2 Mixing of Halal ingredients TECHNOLOGY 4.3 Techniques of mixing Halal ingredients COMMUNICATION 4.4 Work instruction 4.5 Operations manual: Workplace requirement in preparation of Halal non-meat ingredients LAW 4.6 Handling of Halal non-meat ingredients in compliance with Islamic Law 4.7 RA 11058 4.8 PD 856	4.1 Applying hygiene and sanitation in handling Halal non-meat ingredients 4.2 Performing mixing of Halal non-meat ingredients 4.3 Following to Islamic Law in handling Halal non-meat ingredients

RANGE OF VARIABLES

VARIABLE	RANGE																								
1. Obligatory Cleansing	May include: 1.1 Clay soap is dissolved in water 1.2 Wash using dissolved clay soap 1.3 Rinse with water and repeat 6 times																								
2. Exclusive and dedicated Halal Personal Protective Equipment (PPE)	May include: 2.1 Hair Net 2.2 Face Mask 2.3 Gown/Company Uniform 2.4 White Rubber Boots 2.5 Apron 2.6 Gloves 2.7 Goggles 2.8 Ear Plug																								
3. Proper Handwashing	May include: 3.1 Wet hands with water 3.2 Apply soap 3.3 Rub hands together with friction 3.4 Rinse under running water 3.5 Sanitize 3.6 Dry																								
4. Types of food contamination	May include: 4.1 Physical contaminants 4.2 Chemical contaminants 4.3 Biological contaminants 4.4 Haram contaminants																								
5. Exclusive and dedicated Halal tools, equipment and utensils for halal process: ground meat	May Include: <table border="1"> <thead> <tr> <th>EQUIPMENT</th> <th>TOOLS</th> <th>UTENSILS</th> </tr> </thead> <tbody> <tr> <td>Frozen meat cutter</td> <td>Knives</td> <td>Spatula</td> </tr> <tr> <td>Meat grinder with cutting blades and plates: 5mm, 8mm, 13mm</td> <td>Cleaver</td> <td>Plastic scoop</td> </tr> <tr> <td>Weighing scale</td> <td>Plastic chopping board</td> <td>Stainless bowls</td> </tr> <tr> <td>Food processor</td> <td>Honing steel</td> <td>Stainless trays</td> </tr> <tr> <td>Meat mixer</td> <td>Whetstone</td> <td>Stainless mould</td> </tr> <tr> <td>Patty Making Machine</td> <td>Push cart</td> <td>Plastic crates</td> </tr> <tr> <td>Freezer</td> <td>Stainless working table</td> <td></td> </tr> </tbody> </table>	EQUIPMENT	TOOLS	UTENSILS	Frozen meat cutter	Knives	Spatula	Meat grinder with cutting blades and plates: 5mm, 8mm, 13mm	Cleaver	Plastic scoop	Weighing scale	Plastic chopping board	Stainless bowls	Food processor	Honing steel	Stainless trays	Meat mixer	Whetstone	Stainless mould	Patty Making Machine	Push cart	Plastic crates	Freezer	Stainless working table	
EQUIPMENT	TOOLS	UTENSILS																							
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Freezer	Stainless working table																								

By Marination	EQUIPMENT	TOOLS	UTENSILS
	Frozen meat cutter	Knives	Spatula
	Weighing scale	Honing steel	Plastic scoop
	Meat mixer	Whetstone	Stainless bowls
	Vacuum tumbler	Plastic chopping board	Stainless trays
	Food processor	Push cart	Plastic crates
		Stainless working table	
By Injection	EQUIPMENT	TOOLS	UTENSILS
	Frozen meat cutter	Knives	Spatula
	Meat mixer	Honing steel	Plastic scoop
	Brine Injector	Whetstone	Stainless bowls
	Vacuum tumbler	Plastic chopping board	Stainless trays
	Slicer	Push cart	Plastic crates
	Weighing scale	Stainless working table	
By Emulsification	EQUIPMENT	TOOLS	UTENSILS
	Frozen meat cutter	Knives	Spatula
	Meat grinder with 5mm,3mm cutting blade and plate	Honing steel	Plastic scoop
	Bowl cutter	Whetstone	Stainless trays
	Hydraulic stuffer	Plastic chopping board	Stainless bowls
	Linking machine	Stainless steel hangers	Plastic crates
	Oven smokehouse	Push cart	
	Cooking vat	Stainless working table	
	Cooling vat		
	Sausage cutting machine		
	Chiller		
	Weighing scale		
	Food processor		
	May include:		

6. Pre-weighed Halal meat and non-Halal meat ingredients	GROUND	MARINATED	INJECTED	EMULSIFIED
	Ground meat	Sliced/ Meat slab	Whole/ Meat slab	Ground meat
	Curing agents:	Curing agents:	Brine solution:	Curing agents:
	Salt	Salt	Salt	Salt
	Phosphate STPP	Phosphate (SDP)	Phosphate (STPP)	Phosphate (STPP)
	Bulking agents	Bulking agents	Sugar	Bulking agents
	Spices and Seasonings	Spices and seasonings	Dry curing ingredients:	Spices and Seasonings
	Water	Water	Salt	Water
	Colorants	Colorants	Phosphate (SDP)	Colorants
	Fortificants	Fortificants	Sugar	Fortificants
	Preservatives	Preservatives	Spices and Seasonings	Preservatives
			Water	
			Colorants	
		Fortificants		
		Preservatives		
7. Work Instructions	<p>May include:</p> <p>7.1 Order form or any similar form to request the required volume of meat and non-meat ingredients for cutting, mixing and processing</p> <p>7.2 Checklist for preparation of exclusive and dedicated Halal tools, equipment, utensils, PPE, meat and non-meat ingredients</p>			
8. Workplace Requirements	<p>May include:</p> <p>8.1 Good Manufacturing Practices (GMP)</p> <p>8.2 Sanitation Standard Operating Procedure (SSOP)</p> <p>8.3 Occupational Safety and Health (OSH) Program</p> <p>8.4 Operations Manual</p> <p>8.4.1 Workplace</p> <p>8.4.2 Equipment</p> <p>8.4.3 Processing Procedures</p> <p>8.5 Standard Operating Procedure (SOP)</p> <p>8.6 Halal Assurance Management System (HAMS)</p>			
9. Established Procedures	<p>May include:</p> <p>9.1 Observe First-in, First-out Policy</p> <p>9.2 Partial thawing of frozen meat at chiller with 0-4C</p> <p>9.3 Partially thawed meat is prepared according to processing requirements:</p>			

	<p>9.3.1 ground</p> <p>9.3.2 sliced</p> <p>9.3.3 whole/slab</p>
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EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <p>1.2 Applied hygiene and sanitation for personnel</p> <p>1.3 Prepared exclusive and dedicated Halal tools, equipment, utensils and PPE</p> <p>1.4 Prepared Halal meat ingredients</p> <p>1.5 Prepared Halal non-meat ingredients</p>
2. Resource Implications	<p>The following resources should be provided:</p> <p>2.1 Exclusive and dedicated tools, materials and equipment appropriate for the unit of competency</p> <p>2.2 Halal compliant workplace environment appropriate for the unit of competency</p>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <p>3.1 Interview</p> <p>3.2 Demonstration with Questioning</p> <p>3.3 Observation with Questioning</p> <p>3.4 Written Examination</p>
4. Context of Assessment	<p>4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.</p>

UNIT OF COMPETENCY : PROCESS HALAL GROUND MEAT

UNIT CODE : CS-PFB751308

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitude to process Halal ground meat by mixing and molding. It also includes hygiene and sanitation practices during the process and post production activities.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Mix Halal ingredients	1.1 Pre-weighed Halal ingredients are mixed in accordance with the <i>processing sequence</i> . 1.2 Exclusive and dedicated Halal equipment is used following manufacturer's manual.	SCIENCE 1.1 Types of food contaminants 1.2 Mixing of Halal ingredients TECHNOLOGY 1.3 Processing technique: Mixing 1.4 Operation of exclusive and dedicated meat mixer COMMUNICATION 1.5 Operations manual: 1.5.1 Workplace 1.5.2 Equipment LAW 1.6 Handling of ingredients during mixing in compliance with Islamic Law 1.7 RA 11058 1.8 PD 856 1.9 Operation of equipment is in compliance with OSHS	1.1 Practicing hygiene and sanitation in mixing Halal meat and non-Halal meat ingredients 1.2 Following the sequence of proper mixing of Halal ingredients 1.3 Performing mixing of non-Halal meat ingredients. 1.4 Operating exclusive and dedicated meat mixer
2. Mold Halal meat mixture	2.1 Halal meat mixture is molded using patty making machine in accordance with workplace requirement on <i>product specification</i> .	SCIENCE 2.1 Types of food contaminants TECHNOLOGY 2.2 Operation of exclusive and	2.1 Practicing hygiene and sanitation in molding Halal meat mixture 2.2 Molding of Halal meat mixture

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	<p>2.2 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual.</p> <p>2.3 Molded Halal meat mixture is subjected to freezing in accordance with workplace requirements.</p>	<p>dedicated patty making machine</p> <p>2.3 Processing technique: Molding</p> <p>COMMUNICATION</p> <p>2.4 Operations manual</p> <p>2.4.1 Workplace</p> <p>2.4.2 Equipment</p> <p>LAW</p> <p>2.5 Processing in accordance with HAS</p> <p>2.6 RA 11058</p> <p>2.7 PD 856</p>	<p>2.3 Operating exclusive and dedicated Halal patty making machine</p>
<p>3. Perform post-production activities</p>	<p>3.1 Exclusive and dedicated Halal tools, equipment and utensils are cleaned and sanitized in accordance with workplace requirement</p> <p>3.2 Work area is cleaned and sanitized in accordance with workplace requirement</p> <p>3.3 Exclusive and dedicated Halal sanitizer is prepared in accordance with workplace requirement</p> <p>3.4 Environmental rules and regulations on disposal of wastes is observed.</p>	<p>SCIENCE</p> <p>3.1 Proper mixing of sanitizing solution</p> <p>3.2 Uses of sanitizer</p> <p>3.3 Types of food contaminants</p> <p>TECHNOLOGY</p> <p>3.4 Application of sanitizer</p> <p>ENVIRONMENTAL</p> <p>3.5 Proper disposal of wastewater</p> <p>3.6 Proper disposal of used exclusive and dedicated Halal packaging materials</p> <p>MATHEMATICS</p> <p>3.7 Sanitizer level of concentration measurement</p> <p>COMMUNICATION</p> <p>3.8 Operations manual on cleaning and sanitizing tools, equipment and utensils</p> <p>LAW</p> <p>3.9 RA 11058</p> <p>3.10 PD 856</p>	<p>3.1 Demonstrating preparation of exclusive and dedicated Halal sanitizer</p> <p>3.2 Performing proper cleaning and sanitizing of exclusive and dedicated Halal tools, equipment, utensils and meat processing area</p> <p>3.3 Following environmental rules and regulations on disposal of waste materials.</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Processing Sequence	1.1 Curing Ingredients 1.2 Seasonings 1.3 Bulking Ingredients
2. Product Specification	May include: 2.1 Weight 2.2 Size 2.3 Thickness

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Mixed Halal ingredients 1.2 Molded Halal meat mixture 1.3 Performed post-production activities.
2. Resource Implications	The following resources should be provided: 2.1 Exclusive and dedicated Halal Tools, Materials and Equipment appropriate for the unit of competency 2.2 Halal compliant workplace environment appropriate for the unit of competency
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Interview 3.2 Demonstration with Questioning 3.3 Observation with Questioning 3.4 Written Examination
4. Context of Assessment	4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY : PROCESS HALAL MEAT BY MARINATION

UNIT CODE : CS-PFB751309

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitude to process Halal marinated meat by mixing, curing, vacuum tumbling and resting. It also includes hygiene and sanitation practices during the process and post production activities.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Mix Halal ingredients	1.1 Pre-weighed Halal ingredients are mixed in accordance with processing sequence. 1.2 Hygiene and sanitation of mixing ingredients is observed in accordance with workplace requirements. 1.3 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual.	SCIENCE 1.1 Types of food contaminants 1.2 Mixing of Halal ingredients TECHNOLOGY 1.3 Operation of exclusive and dedicated Halal meat mixer 1.4 Processing technique: Mixing ENVIRONMENT 1.5 Proper disposal of waste materials COMMUNICATION 1.6 Operations manual: 1.6.1 workplace 1.6.2 equipment LAW 1.7 Handling of ingredients during mixing in compliance with Islamic Law 1.8 RA 11058 1.9 PD 856	1.1 Performing mixing of Halal ingredients 1.2 Practicing hygiene and sanitation in mixing Halal ingredients 1.3 Operating exclusive and dedicated Halal meat mixer

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Cure Halal meat mixture	2.1 <i>Curing method</i> is performed in accordance with workplace requirements. 2.2 Handling exclusive and dedicated Halal meat mixture is followed in accordance with hygiene and sanitation practices.	SCIENCE 2.1 Types of Food Contaminants 2.2 Curing Process TECHNOLOGY 2.3 Processing Technique: Curing COMMUNICATION 2.4 Operations Manual in Workplace LAW 2.5 Processing in accordance with HAS 2.6 RA 11058 2.7 PD 856	2.1 Performing Halal curing methods and techniques 2.2 Following hygiene and sanitation protocols in handling Halal meat mixture.
3. Vacuum tumbling and resting	3.1 Vacuum tumbling process of cured Halal meat mixture and resting are performed in accordance workplace requirements. 3.2 Exclusive and dedicated Halal equipment is operated following manufacturer's manual. 3.3 Hygiene and sanitation protocols is followed in accordance with workplace requirements.	SCIENCE 3.1 Types of Food Contaminants 3.2 Vacuum Tumbling and Resting Process TECHNOLOGY 3.3 Operation of Vacuum Tumbler 3.4 Processing Technique: Vacuum tumbling and resting COMMUNICATION 3.5 Operations Manual 3.5.1 Workplace 3.5.2 Equipment LAW 3.6 Processing in accordance with HAS 3.7 RA 11058 3.8 PD 856	3.1 Performing vacuum tumbling of Halal cured meat mixture and resting 3.2 Following hygiene and sanitation protocols during tumbling process 3.3 Operating exclusive and dedicated Halal vacuum tumbler

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
4. Post-production activities	4.1 Exclusive and dedicated Halal tools, equipment and utensils are cleaned and sanitized in accordance with workplace requirement 4.2 Work area is cleaned and sanitized in accordance with workplace requirement 4.3 Exclusive and dedicated Halal sanitizer is prepared in accordance with workplace requirement 4.4 Environmental rules and regulations on disposal of wastes is observed.	SCIENCE 4.1 Proper mixing of sanitizing solution 4.2 Uses of Sanitizer 4.3 Types of food contaminants TECHNOLOGY 4.4 Application of sanitizer ENVIRONMENTAL 4.5 Proper disposal of wastewater 4.6 Proper disposal of used packaging materials MATHEMATICS 4.7 Sanitizer level of concentration measurement COMMUNICATION 4.8 Operations manual on cleaning and sanitizing tools, equipment and utensils LAW 4.9 Cleaning and sanitizing is in accordance with GMP 4.10 RA 11058 4.11 PD 856	4.1 Performing proper cleaning and sanitizing of exclusive and dedicated Halal tools, equipment, utensils and meat processing area 4.2 Demonstrating preparation of exclusive and dedicated Halal sanitizer 4.3 Following environmental rules and regulations on disposal of waste.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Curing Method	May include: 1.1 Dry Curing 1.2 Wet Curing

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Mixed Halal ingredients. 1.2 Cured Halal meat mixture. 1.3 Vacuum tumbled and rested Halal cured meat mixture. 1.4 Performed post-production activities.
2. Resource Implications	The following resources should be provided: 2.1 Exclusive and dedicated Halal Tools, Materials and Equipment appropriate for the unit of competency 2.2 Halal compliant workplace environment appropriate for the unit of competency
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Interview 3.2 Demonstration with Questioning 3.3 Observation with Questioning 3.4 Written Examination
4. Context of Assessment	4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.

UNIT OF COMPETENCY : PROCESS HALAL MEAT BY INJECTION

UNIT CODE : CS-PFB751310

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitude to process Halal meat by preparation of Halal brine solution, injecting, vacuum tumbling, resting, curing, washing, cutting, molding, thermal processing, cooling, removal of stockinette, and slicing. It also includes hygiene and sanitation practices during the process and post production activities.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare Halal brine solution	1.1 Pre-weighed Halal ingredients are mixed as instructed by supervisor. 1.2 Mixing of Halal ingredients is performed in accordance with workplace requirements.	SCIENCE 1.1 Types of food contaminants 1.2 Mixing of ingredients TECHNOLOGY 1.3 Techniques of proper mixing of ingredients ENVIRONMENT 1.4 Proper disposal of used packaging materials 1.5 Wastewater COMMUNICATION 1.6 Operations Manual in Workplace 1.7 Work Instruction LAW 1.8 Processing in accordance with HAS 1.9 RA 11058 1.10PD 856	1.1 Preparing Halal brine solution 1.2 Mixing of Halal ingredients
2. Inject Halal brine solution	2.1 Prepared Halal brine solution is transferred to exclusive and dedicated Halal brine injector in accordance with workplace requirements. 2.2 Halal brine solution is injected into Halal meat slab in accordance with workplace requirement.	SCIENCE 2.1 Types of food contaminants 2.2 Brine solution TECHNOLOGY 2.3 Processing technique: injecting 2.4 Operation of exclusive and dedicated Halal brine injector COMMUNICATION 2.5 Operations manual: 2.5.1 Workplace 2.5.2 Equipment	2.1 Transferring prepared Halal brine solution to exclusive and dedicated Halal brine injector 2.2 Operating brine injector 2.3 Injecting brine solution

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.3 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual.	LAW 2.6 Processing in accordance with HAS 2.7 RA 11058 2.8 PD 856	
3. Perform vacuum tumbling and resting processes	3.1 Injected Halal meat slab is transferred to exclusive and dedicated Halal vacuum tumbler in accordance with workplace requirements. 3.2 Halal meat slab is tumbled in accordance with workplace requirements. 3.3 Tumbled Halal meat slab is rested in accordance with workplace requirements. 3.4 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual.	SCIENCE 3.1 Types of Food Contaminants 3.2 Vacuum tumbling and resting process TECHNOLOGY 3.3 Processing techniques: Vacuum tumbling and Resting 3.4 Operation of exclusive and dedicated Halal vacuum tumbler COMMUNICATION 3.5 Operations manual 3.5.1 Workplace 3.5.2 Equipment LAW 3.6 Processing in accordance with HAS 3.7 RA 11058 3.8 PD 856	3.1 Performing tumbling and resting process 3.2 Operating exclusive and dedicated Halal vacuum tumbler 3.3 Applying hygiene and sanitation protocols during vacuum tumbling
4.0 Cure Halal meat slab	4.1 Halal meat slab is covered with dry curing mixture as instructed by supervisor. 4.2 Application of Halal dry cure mixture is performed in accordance with workplace requirement. 4.3 Halal meat slab with Halal dry curing mixture is cured in accordance with	SCIENCE 4.1 Types of food contaminants 4.2 Curing process TECHNOLOGY 4.3 Processing Techniques: 4.3.1 Application of dry curing mix 4.3.2 Curing ENVIRONMENT 4.4 Proper disposal of waste materials	4.1 Performing application of dry curing mixture 4.2 Identifying types of contamination

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	workplace requirement.	COMMUNICATION 4.5 Operations Manual in Workplace LAW 4.6 Processing in accordance with HAS 4.7 RA 11058 4.8 PD 856	
5. Prepare cured meat slab	5.1 <i>Washing of Halal cured meat slabs</i> is performed in accordance with workplace processing requirement. 5.2 Cutting or portioning of Halal meat slab is performed according to workplace processing requirement.	SCIENCE 5.1 Types of Food Contaminants 5.2 Washing Process TECHNOLOGY 5.3 Processing Technique: Washing Cutting MATHEMATICS 5.4 Cutting of Halal meat slabs in accordance to weight LAW 5.5 Processing is in accordance with HAS Law 5.6 RA 11058 5.7 PD 856	5.1 Washing of cured Halal meat slabs 5.2 Cutting or portioning of Halal meat slab
6. Mold Halal meat slab	6.1 Molding of cut Halal cured meat is performed in accordance with workplace requirement using stockinette and meat netting machine. 6.2 Exclusive and dedicated Halal equipment is operated following manufacturer's manual.	TECHNOLOGY 6.1 Processing technique: Molding 6.2 Operation of Automatic netting machine COMMUNICATION 6.3 Operations manual 6.3.1 Workplace 6.3.2 Equipment LAW 6.4 Processing is in accordance with HAS 6.5 RA 11058 6.6 PD 856	6.1 Molding of Halal cut cured meat 6.2 Operating exclusive and dedicated Halal automatic netting machine
7. Perform thermal processing	7.1 Molded processed Halal meat is smoked in smokehouse in accordance with	SCIENCE 7.1 Smoking and Cooking Processes	7.1 Performing smoking process 7.2 Operating smokehouse

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	<p>workplace requirements.</p> <p>7.2 Smoked processed Halal meat is cooked in cooking vat with seasonings in accordance with workplace processing requirements.</p> <p>7.3 Exclusive and dedicated Halal equipment is operated following manufacturer's manual.</p>	<p>TECHNOLOGY</p> <p>7.2 Operation of:</p> <p> 7.2.1 Smokehouse</p> <p> 7.2.2 Cooking vat</p> <p>7.3 Processing Techniques: Smoking and Cooking</p> <p>ENVIRONMENT</p> <p>7.4 Proper disposal of:</p> <p> 7.4.1 Used packaging materials</p> <p> 7.4.2 Wastewater</p> <p> 7.4.3 Smoke Emission</p> <p> 7.4.4 Charred wood chips</p> <p>COMMUNICATION</p> <p>7.5 Operations Manual</p> <p> 7.5.1 Workplace</p> <p> 7.5.2 Equipment</p> <p>LAW</p> <p>7.6 Processing in accordance with HAS</p> <p>7.7 RA 11058</p> <p>7.8 PD 856</p>	<p>7.3 Performing cooking process</p> <p>7.4 Operating cooking vat</p>
8. Prepare cooked Halal processed meat	<p>8.1 Cooling of cooked Halal processed meat is performed in accordance with workplace requirements.</p> <p>8.2. Removing of stockinette is performed from cooled Halal processed meat in accordance with workplace requirement</p>	<p>SCIENCE</p> <p>8.1 Cooling Process</p> <p>8.2 Types of Food Contaminants</p> <p>TECHNOLOGY</p> <p>8.3 Processing Technique: Cooling Removal of Stockinet</p> <p>COMMUNICATION</p> <p>8.4 Operations Manual in Workplace</p> <p>ENVIRONMENT</p> <p>8.5 Proper disposal of used stockinette</p> <p>LAW</p> <p>8.6 Processing in accordance with HAS</p> <p>8.7 RA 11058</p> <p>8.8 PD 856</p>	<p>8.1 Performing cooling process</p> <p>8.2. Removing of stockinette</p>

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
9. Slice Halal processed meat	9.1 Slicing of Halal processed meat is performed in accordance with workplace requirement 9.2 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual.	SCIENCE 9.1 Types of Food Contaminants 9.2 Slicing of Processed Meat TECHNOLOGY 9.3 Processing Technique: Slicing 9.4 Operation of Exclusive and dedicated Halal meat slicer COMMUNICATION 9.5 Operations Manual: 9.1.1 Workplace 9.1.2 Equipment LAW 9.6 Processing in accordance with HAS 9.7 RA 11058 9.8 PD 856	9.1 Operating mechanical meat slicer 9.2 Identifying types of contamination
10. Post-production activities	10.1 Exclusive and dedicated Halal tools, equipment and utensils are cleaned and sanitized in accordance with workplace requirement 10.2 Work area is cleaned and sanitized in accordance with workplace requirement 10.3 Sanitizer is prepared in accordance with workplace requirement 10.4 Environmental rules and regulations on disposal of wastes is observed.	SCIENCE 10.1 Proper mixing of sanitizing solution 10.2 Uses of sanitizer 10.3 Types of food contaminants TECHNOLOGY 10.4 Application of sanitizer ENVIRONMENTAL 10.5 Proper disposal of waste materials MATHEMATICS 10.6 Sanitizer level of concentration measurement COMMUNICATION 10.7 Operations manual on cleaning and sanitizing tools, equipment and utensils LAW 10.8 Cleaning and sanitizing in accordance with GMP	10.1 Performing proper cleaning and sanitizing of exclusive and dedicated Halal tools, equipment, utensils and meat processing area 10.2 Demonstrating preparation of exclusive and dedicated Halal sanitizer 10.3 Following environmental rules and regulations on disposal of waste.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		10.9 RA 11058 10.10 PD 856	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Washing of cured meat slab	May include: 1.1 Rinse the meat thoroughly under running water

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Prepared Halal brine solution 1.2 Injected Halal brine solution 1.3 Performed Vacuum tumbling and resting of Halal meat slab 1.4 Cured Halal meat slab 1.5 Washed Halal cured meat slab 1.6 Cut or portioned Halal meat slab 1.7 Molded Halal meat slab 1.8 Performed thermal processing 1.9 Cooled cooked Halal processed meat
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	<p>1.10 Removed stockinette from Halal processed meat</p> <p>1.11 Sliced Halal processed meat</p> <p>1.12 Performed post-production activities</p>
2. Resource Implications	<p>The following resources should be provided:</p> <p>2.1 Exclusive and dedicated Halal Tools, Materials and Equipment appropriate for the unit of competency</p> <p>2.2 Halal compliant workplace environment appropriate for the unit of competency</p>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <p>3.1 Interview</p> <p>3.2 Demonstration with Questioning</p> <p>3.3 Observation with Questioning</p> <p>3.4 Written Examination</p>
4. Context of Assessment	<p>4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.</p>

UNIT OF COMPETENCY : PROCESS HALAL MEAT BY EMULSIFICATION

UNIT CODE : CS-PFB751311

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitude to process Halal meat by emulsification, stuffing, linking, drying, smoking, cooking, cooling, cutting, and chilling. It also includes hygiene and sanitation practices during the process and post production activities.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Perform emulsification of Halal meat ingredients with non-Halal meat ingredients	1.1 Chopping of pre-weighed Halal ingredients is performed in accordance with workplace requirements. 1.2 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual.	SCIENCE 1.1 Types of Food Contamination 1.2 Chopping process TECHNOLOGY 1.3 Operation of exclusive and dedicated Halal bowl cutter COMMUNICATION 1.4 Operations Manual: 1.4.1 Processing 1.4.2 Equipment LAW 1.5 Hygiene and sanitation in accordance with GMP 1.6 Operation of equipment in accordance with OSHS 1.7 Processing in accordance with HAS 1.8 RA 11058 1.9 PD 856	1.1 Performing chopping of ingredients. 1.2 Operating meat bowl cutter.
2. Stuff Halal meat emulsion into casing	2.1 Halal meat emulsion is transferred to exclusive and dedicated Halal stuffing machine in accordance with workplace requirements. 2.2 Setting of exclusive and dedicated Halal	SCIENCE 2.1 Types of Food Contaminants 2.2 Stuffing process into casing 2.3 Types of Casings TECHNOLOGY 2.4 Operation of Exclusive and	2.1 Transferring of meat emulsion to stuffing machine. 2.2 Setting of stuffing machine 2.2 Stuffing of meat emulsion into casings. 2.3 Operating Stuffing machine

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	<p>stuffing machine is performed in accordance with workplace requirement.</p> <p>2.2 Halal stuff meat emulsion into casings is performed in accordance with workplace requirements.</p> <p>2.3 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual</p>	<p>dedicated Halal Stuffing machine</p> <p>2.5 Meat Processing Techniques: Stuffing</p> <p>COMMUNICATION</p> <p>2.6 Operations manual: 2.6.1 Workplace 2.6.2 Equipment</p> <p>LAW</p> <p>2.7 Operation of equipment in accordance with OSHS</p> <p>2.8 Hygiene and sanitation in accordance with GMP</p> <p>2.9 Processing in accordance with HAS</p> <p>2.10 RA 11058</p> <p>2.11 PD 856</p>	
3. Link Halal stuffed emulsion	<p>3.1 Linking is performed in accordance with Halal compliant workplace requirements on size of Halal emulsified-type products</p> <p>3.2 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual</p>	<p>SCIENCE</p> <p>3.1 Types of Food Contaminants</p> <p>3.2 Linking Process</p> <p>TECHNOLOGY</p> <p>3.3 Operation of exclusive and dedicated Halal Linking machine</p> <p>3.4 Halal Meat Processing techniques: Linking</p> <p>COMMUNICATION</p> <p>3.5 Operations Manual: 3.5.1 Workplace 3.5.2 Equipment</p> <p>LAW</p> <p>3.6 Operation of equipment in accordance with OSHS</p> <p>3.7 Hygiene and sanitation in accordance with GMP</p>	<p>3.1 Linking of emulsified-type products</p> <p>3.2 Operating exclusive and dedicated Halal linking machine</p>

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		3.8 Processing in accordance with HAS 3.9 RA 11058 3.10 PD 856	
4. Perform Thermal Processing of Halal emulsified-type products	4.1 Drying of Halal emulsified-type products in smokehouse is performed in accordance with Halal workplace requirements. 4.2 Smoking of dried Halal emulsified products using woodchips is performed in accordance with workplace requirements. 4.3 Cooking of Halal smoked emulsified-type products is performed in accordance with workplace requirements. 4.4 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual	SCIENCE 4.1 Types of Food Contaminants 4.2 Drying, Smoking and Cooking Processes TECHNOLOGY 4.3 Operation of equipment such as: 4.3.1 Smokehouse 4.3.2 Cooking Vat COMMUNICATION 4.4 Operations Manual: 4.4.1 Workplace 4.4.2 Equipment LAW 4.5 Operation of equipment in accordance with OSHS 4.6 Hygiene and sanitation in accordance with GMP 4.7 Processing in accordance with HAS 4.8 RA 11058 4.9 PD 856	4.1 Drying of emulsified-type products. 4.2 Smoking of emulsified products. 4.3 Cooking of emulsified products. 4.4 Operating equipment such as: 4.4.1 Smoke house 4.4.2 Cooking vat
5. Cool Halal emulsified-type products	5.1 Cooling of cooked Halal emulsified-type products in brine solution is performed in accordance with workplace requirements 5.2 Exclusive and dedicated Halal equipment is operated in accordance with	SCIENCE 5.1 Types of Food Contaminants 5.2 Meat Processing Techniques: Cooling TECHNOLOGY 5.3 Operation of exclusive and dedicated Halal cooling vat COMMUNICATION 5.4 Operations manual: 5.4.1 Workplace	5.1 Cooling of Halal cooked emulsified-type products in cooling vat. 5.2 Operating exclusive and dedicated Halal cooling vat

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	manufacturer's manual	5.4.2 Equipment LAW 5.5 Operation of equipment in accordance with OSHS 5.6 Hygiene and sanitation in accordance with GMP 5.7 Processing in accordance with HAS 5.8 RA 11058 5.9 PD 856	
6. Cut Halal cooked emulsified-type products	6.1 Cutting of Halal cooked emulsified-type products is performed in accordance with workplace requirement. 6.2 Exclusive and dedicated Halal equipment is used in accordance with manufacturer's manual.	TECHNOLOGY 6.1 Meat Processing techniques: cutting emulsified-type products 6.2 Operation of exclusive and dedicated Halal sausage cutting machine COMMUNICATION 6.3 Operations Manual: 6.3.1 Workplace 6.3.2 Equipment LAW 6.4 Operation of equipment in accordance with OSHS 6.5 Hygiene and sanitation in accordance with GMP 6.6 Processing in accordance with HAS 6.7 RA 11058 6.8 PD 856	6.1 Cutting of Halal cooked-type emulsified products. 6.2 Operating exclusive and dedicated Halal sausage cutting machine
7. Chill Halal emulsified-type products	7.1 Chilling cooked Halal emulsified-type products is performed in accordance to workplace requirement.	TECHNOLOGY 7.1 Meat processing techniques: chilling COMMUNICATION 7.2 Operations manual: 7.2.1 Workplace	7.1 Chilling of Halal cooked emulsified-type products.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		7.2.2 Equipment on setting of Chiller LAW 7.3 Processing in accordance with HAS 7.4 RA 11058 7.5 PD 856	
8. Post-production activities	8.1 Exclusive and dedicated Halal tools, equipment and utensils are cleaned and sanitized in accordance with workplace requirement 8.2 Work area is cleaned and sanitized in accordance with workplace requirement 8.3 Exclusive and dedicated Halal sanitizer is prepared in accordance with workplace requirement 8.4 Environmental rules and regulations on disposal of wastes is observed.	SCIENCE 8.1 Proper mixing of sanitizing solution 8.2 Uses of sanitizer 8.3 Types of food contaminants TECHNOLOGY 8.4 Application of sanitizer ENVIRONMENTAL 8.5 Proper disposal of waste materials and wastewater MATHEMATICS 8.6 Sanitizer level of concentration measurement COMMUNICATION 8.7 Operations manual in workplace on cleaning and sanitizing tools, equipment and utensils LAW 8.8 Cleaning and sanitizing is in accordance with OSH program 8.9 RA 11058 8.10 PD 856	8.1 Performing proper cleaning and sanitizing of Exclusive and dedicated Halal tools, equipment, utensils and meat processing area 8.2 Demonstrating preparation of exclusive and dedicated Halal sanitizer 8.3 Following environmental rules and regulations on disposal of waste.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Casings	May include: 1.1 Collagen 1.2 Cellulose 1.3 Natural (intestine) 1.3.1 Sheep 1.3.2 Goat
2. Size	May include: 2.1 Cocktail 2.2 Regular 2.3 Jumbo
3. Woodchips	May include: 3.1 Maple 3.2 Hickory 3.3 Apple 3.4 Birchtree 3.5 Beechwood

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Performed emulsification of Halal meat ingredients with non-Halal meat ingredients. 1.2 Stuffed Halal meat emulsion into casing. 1.3 Linked Halal stuffed meat emulsion. 1.4 Performed thermal processing of Halal emulsified-type products. 1.5 Cooled Halal emulsified-type products. 1.6 Cut Halal cooked emulsified-type products. 1.7 Chilled Halal emulsified-type products. 1.8 Performed post-production activities.
2. Resource Implications	The following resources should be provided: 2.1 Exclusive and dedicated Halal Tools, Materials and Equipment appropriate for the unit of competency 2.2 Halal compliant workplace environment appropriate for the unit of competency
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Interview 3.2 Demonstration with Questioning 3.3 Observation with Questioning 3.4 Written Examination
4. Context of Assessment	4.1 Competency may be assessed in the actual workplace or at the designated TESDA Accredited Assessment Center.

GLOSSARY OF TERMS

For the purpose of this competency standard, the following words are defined:

Automatic netting machine - is high efficiency packing machine. It is very versatile and can work with a wide range of products in a tubular net and closed by metal clip.

Blending - process of combining or blending various ingredients to produce an enhanced product either for further processing in the food industry or for use by the consumer.

Biological contaminants - any substances produced by living creatures such as humans, rodents, pests or microorganisms. This includes bacterial contamination, viral contamination or parasite contamination that's transferred through saliva, pest droppings, blood or faecal matter.

Bowl cutter or chopper - meat chopping equipment designed to produce very small lean meat and fat particles.

Brine - describes a water/salt solution used for curing meat products.

Brine injector machine - an equipment used to inject salt water, soybean protein, starch, fat, and other auxiliary materials into food material evenly, deeply penetrates, pickles, loosens the structure of the meat, makes the meat tender and soft, improves the taste of meat products, and increases the production rate of meat products

Bulking agents - non-nutritive substances like non-starch polysaccharides, are added to foods to increase bulk, volume or weight without changing the taste, while also preserving functionality and utility. This enhances the feeling of satiety, particularly in foods designed for weight reduction.

Casings - defined as soft cylindrical containers used to be filled with sausage mix. Casings can be of natural origin or industrially manufactured (artificial). Natural casings are obtained by special treatment of animal intestines as material

Chemical contaminants - include a broad range of chemicals that may be present in food and that have the potential to cause harm. Examples: include nitrogen, bleach, salts, pesticides, metals, toxins produced by bacteria, and human or animal drugs. Chemical contaminants are also among the most abundant impurities in water sources.

Chiller - cooling system that removes heat by circulating a heat-absorbing refrigerant through a series of mechanisms from which the heat is released.

Chilling - fundamental operation in applying cold to meat to reduce its temperature quickly. This is done in a cold chamber with intensive air draught or movement. Rapid cooling of the meat surface not only slows and nearly stops the development of surface micro-organisms but also reduces weight loss and discoloration of the surface owing to haemoglobin oxidation. Different systems of primary chilling are in use (including immersion in iced water, especially for poultry) but air chilling is the most common

Colorants - color additive, or food colorant, is according to the FDA, “any colorant, pigment or substance that, when added or applied to a food, drug or cosmetic, or to the human body, is capable (alone or through reactions with other substances) of imparting color”.

Comminuted - meat products that are ground, seasoned, cured, smoked shredded or heat processed. Examples are longganisa, frankfurters and vienna sausage.

Contaminant - refers to any substance not intentionally added to food. Food production processes can lead to substances entering the food at any moment: during manufacturing, handling, storage, processing or distribution. Contaminants can also enter the food from the environment. The presence of such substance in food must be monitored carefully to avoid contamination affecting the quality of the food or making the food unsafe.

Contamination - describes a situation of the presence of unwanted elements that is not appropriate for use.

Curing - method used to achieved the desired red color in processed meat products. The products are salted with a mixture of common salt (sodium chloride, NaCl) and the curing agent sodium nitrite (NaNO₂). Sodium nitrite facilitates formation of a red curing color and typical aroma/flavor.

Curing ingredients - are of **salt, sugar and nitrite or nitrate** for the purposes of preservation, flavor and color.

Dry cure mixture - curing mix is prepared containing salt or nitrite curing salt, together with spices and other additives.

Dim sum - a traditional Chinese food consisting of a variety of items such as steamed or fried dumplings, pieces of cooked chicken, and rice balls served in small portions.

Emulsification - the process of mixing two immiscible phases (e.g. oil and water) with the aid of a surface active agent (emulsifier) into homogenous dispersion or emulsion.

Emulsion-type sausages - a mixture of finely chopped meat, fatty tissue and water or ice. They are usually smoked. The formulation for this type of sausage not only contains meats of high-water binding properties but also includes meats characterized by intermediate binding properties. Common examples of meat emulsions include bologna, frankfurters, sausages, and meat loaf. The continuous phase mainly consists of water, water-soluble proteins and salt-soluble proteins.

First-In-First-Out (FIFO) - an inventory control method designed to properly rotate stock so that older products are distributed first, and newer products remain in inventory. It is widely used across all types of industries including food, retail, pharmaceuticals, and manufacturing and applicable whether materials are stored on the shelf, in a dynamic warehouse, or in a refrigerator. It's even more important in environments where there is a high volume of inventory with limited shelf life.

Flavorings - products that are added to food to impart, modify, or enhance the flavor of food (with the exception of food enhancers).

Fortificants - used to increase the micronutrient content of foods or to replace nutrients lost in food processing, thus playing a valuable role in preventing dietary deficiencies.

Food additive - any substance not normally consumed as food by itself and not normally used as typical ingredient of food, whether or not it has nutritive value, the intentional addition of which is for technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packaging, transport or holding of such food results, or maybe reasonably expected result, (directly or indirectly) in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods.

Frozen Meat Cutter - is mainly used for cutting frozen meat into blocks.

Good Manufacturing Practices (GMP) - refer to a quality assurance system aimed at ensuring that products are consistently manufactured, packed, repacked or held to quality standards appropriate for the intended use.

Halâl - an Arabic term which means permissible or lawful.

Halâl Assurance Management System (HAS) - system that implements a food safety program (e. g. HACCP, GMP, SSOPs) and Halâl requirements across the supply chain.

Halal cleansing - cleaning that requires specific procedures or procedural steps that requires rigor and specific cleaning agents or chemicals/substance.

Honing steel - is not use to sharpen a knife, but to get an edge straight again. The honing steels pushes small irregularities in the knife's steel straight again.

Hydraulic stuffer or filling machines – an equipment used for filling all types of batter in containers such as casings, glass jars, cans etc.

Hygiene - refers to a set of activities that need the implementation of specific standards, codes of practice, and regulatory action by the regulatory body to ensure the safety of the meat for consumers to eat.

Marination - meat processing technique involving immersion or incorporation of uncooked or cooked seasoned liquid marinades, which may contain various additives such as acids, enzymes, and spices.

Meat grinder or Mincer - meat processing plant equipment help to cut, mix, chop or mince meat into smaller pieces. Grinders create ground meat products that can be turned into patties, sausages, or sold as-is for consumers.

Meat Mixer - an equipment used to mix meats and spices. This type of mixers are essential for mixing large batches or ground meats for meat balls, sausages, patties, and other prepared meat products.

Meat Processing - is a process utilized in altering fresh meat except simple grinding, cutting, and mixing. In the broadest sense these includes curing, smoking, canning, freezing, CS for Halal Food Processing (Halal Meat Processing) Level II

dehydration, production of intermediate moisture-products and the use of certain additives such as chemicals and enzymes.

Meat Product - any product capable of use as human food which is made wholly or in part from any meat or other portion of the carcass of any food animals, excepting products which contain meat or other portions of such carcasses only in a relatively small proportion or historically have not been considered by consumers as products of the meat industry, and which are exempted from definition as a meat product by the Secretary under such conditions as he may prescribe to assure that the meat or other portions of such carcasses contained in such product are not adulterated and that such products are not represented as meat products.

Meat slab - a thick, flat slice of meat.

Mixing - refers to the blending of different meat cuts or types to create specific products like sausages, burgers, or meat balls.

National Meat Inspection Service (NMIS) - the specialized regulatory agency in the Department of Agriculture that is the country's sole national controlling and competent authority on all matters pertaining to meat inspection and hygiene both for locally produced and imported meat.

Non-comminuted - meat products that are prepared from whole intact cuts of meat. These products usually are cured, seasoned, heat processed and cooked and often they molded or formed.

Non halal contaminants - several sources for the breach of halal integrity including contamination with the non-halal product during logistics activities (Tieman, 2017), packaging with the non-halal product (Supian, 2018), fake logos on packaging (Khan et al., 2020a (Khan et al., 2020b and improper segregation (Ali et al., 2014). The cross-contamination between halal and non-halal products is a major concern for halal logistics providers.

Occupational Safety and Health (OSH) - also known as Occupational Safety and Health (OHS) refers to the generic practice of addressing and reducing potential safety and health risk to employees. This can cover anything from risk assessment, injury, prevention, work-life balance, safety protocols, workplace hazards, to compensation and benefits, and employee management.

Patty making machine - an equipment designed to make various hamburger patties. It can automatically complete filling, forming patties, sticker (optional), output and other processes of the fillings.

Personal Protective Equipment (PPE) - an equipment worn to prevent food contamination or injuries to workers from such factors as cuts, burns or chemical exposure.

Physical contaminants - when a physical object enters food at some stage of the production or preparation process. Physical objects in food can be a choking hazard and often introduce biological contaminants as well. Even if the object is not likely to injure your customer, finding an object in their food can be very distressing for a customer (who knows that harmful microorganisms on the object could make them ill). Common examples of physical

contaminants in food businesses include: hair fingernails, bandages, jewelries, broken glass, staples, wrap/packaging plastic, dirt from unwashed fruit and vegetables, pests, pest droppings, rodent hair.

Preservatives - any substances used in processed meats for food safety, shelf life and food technology reasons. Sodium nitrite or potassium nitrite play a key role in the safety of processed meats. Nitrites, or in slow cured meats sodium or potassium nitrates which are gradually converted to nitrites, are the key ingredients in meat cures. They provide excellent protection against botulism in processed meats. At the same time their use results in the characteristic color and flavor of cured meats.

Probe thermometer - these are handheld devices with a metal probe that is inserted into the meat to measure its internal temperature. They provide quick and accurate readings and are ideal for use during cooking or smoking.

Processed meats - meats that have been preserved by smoking or salting, curing or adding chemical preservatives. These includes deli meats, bacon and hotdogs.

Restructured meat products - reformed, flaked, chopped or shaped based on size and amount of meat added (Anandh and Villi, 2018). Meat products are prepared in various ways in the food industry, food service, or at home. They can be made with different processes, ingredients, or cooking methods. The main goal is to create healthy and tasty meat products.

Sanitation - reduction of contamination with foreign matter including microorganisms to a level harmless to health.

Sanitation Standard Operating Procedures (SSOPs) - documented system for assuring that personnel, facilities, equipment and utensils is clean and where necessary, sanitized to specified levels prior to and during operations.

Scoop - utensil used to take samples of powders, granulates and pastes.

Seasonings - blends of dried herbs and spices. It can be used to enhance or add flavor to dish, both before and after cooking.

Shariah (Islamic Law) - the order of Allah which relate to the action of the people who are being accountable (mukallafah) by obligation, opinion or al wadhú implementation of any Shariah, e. g. adhering to the prayer time is the requirement for prayer to be valid) or pertaining to the rule or order of Allah S. W. T. to be followed by Muslim Ummah in their daily activities that is based on *Quran, Sunnah, Ijma and Qiyas*.

Smokehouse - an equipment used to smoke products like meat, sausages, poultry or fish. The properly designed meat smoker must generate smoke (cold and hot), be able to achieve and maintain desired temperatures inside and be able to cook the product to the required inside meat temperature, most often 152° - 160° F (67°-72° C).

Smoking - a method of drying that also imparts flavor to the food (usually meat items), and smoke helps keep bacteria carrying-insects away during the drying process.

Spices - a plant derived substances that add flavor to any dish. Spices can come from plant parts: roots, rhizomes, stems, leaves, bark, flowers, fruits and seeds. Examples; black/white pepper, chili, clove, nutmeg, and cinnamon.

Stainless mold - a heavy metal mold used to press all types of meats and makes a perfect piece of kit for making loaf and terrines.

Stockinettes - the quickest and smartest way to wrap your meat. They are primarily used to cover, protect, and keep the carcass clean while also assisting with handling.

Thawing - the process of warming food that has been frozen until there is no residual ice left. This is done so the food can be prepared or eaten properly.

Tie-linking machine - is used for twisting and clipping final filled sausage.

Thermal process - non catalytic processes that decompose, rearrange, or combine hydrocarbon molecules by the application of heat.

Tumbler or Massager - a rotating drum with steel paddles inside slowly moves the meat pieces thus causing a mechanical massaging effect.

Vacuum tumbling – specialized process for marinating meat that results in the maximum saturation of the spices and brine into the meat. This process can be performed at a domestic level as well as on a commercial scale. Vacuum tumbling has become a popular process and the resulting meat products have become very desirable for both meat processors as well as consumers. Meat processors like the fact that the finished meat products weigh more than the original non vacuum tumbled products and that added weight is in the form of a liquid that will allow the product to remain moister after the cooking process is completed as well as taste better.

Whetstone – also known as sharpening stone, used to sharpen the edges of a knife to retain its sharpness.

Woodchips – are commonly used in food processing for smoking meats and imparting a rich and smoky flavor. Most common woods used are maple, apple, cherry, hickory, alder.

ACCRONYM

- GMP** - Good Manufacturing Practices
- HAS** - Halal Assurance Management System
- OSH** - Occupational Safety and Health
- OSHS** - Occupational Safety and Health Standards
- PPE** - Personal Protective Equipment
- SDP** - Sodium di-poly Phosphate
- SOP** - Standard Operating Procedures
- SSOP** - Sanitation Standard Operating Procedure
- STPP** - Sodium tri-poly Phosphate

LAWS

- RA 11058** - An Act Strengthening Compliance with Occupational Safety and Health Standards and Providing Penalties for Violations
- PD 856** - Philippine Code of Sanitation of 1975, which mandates the DOH to promulgate rules and regulations for the proper implementation and enforcement of the code.
- R.A. 10611** - An Act to strengthen the Food Safety Regulatory System in the Country to Protect Consumer Health and Facilitate Market Access of local foods and food products, and for other purposes.

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