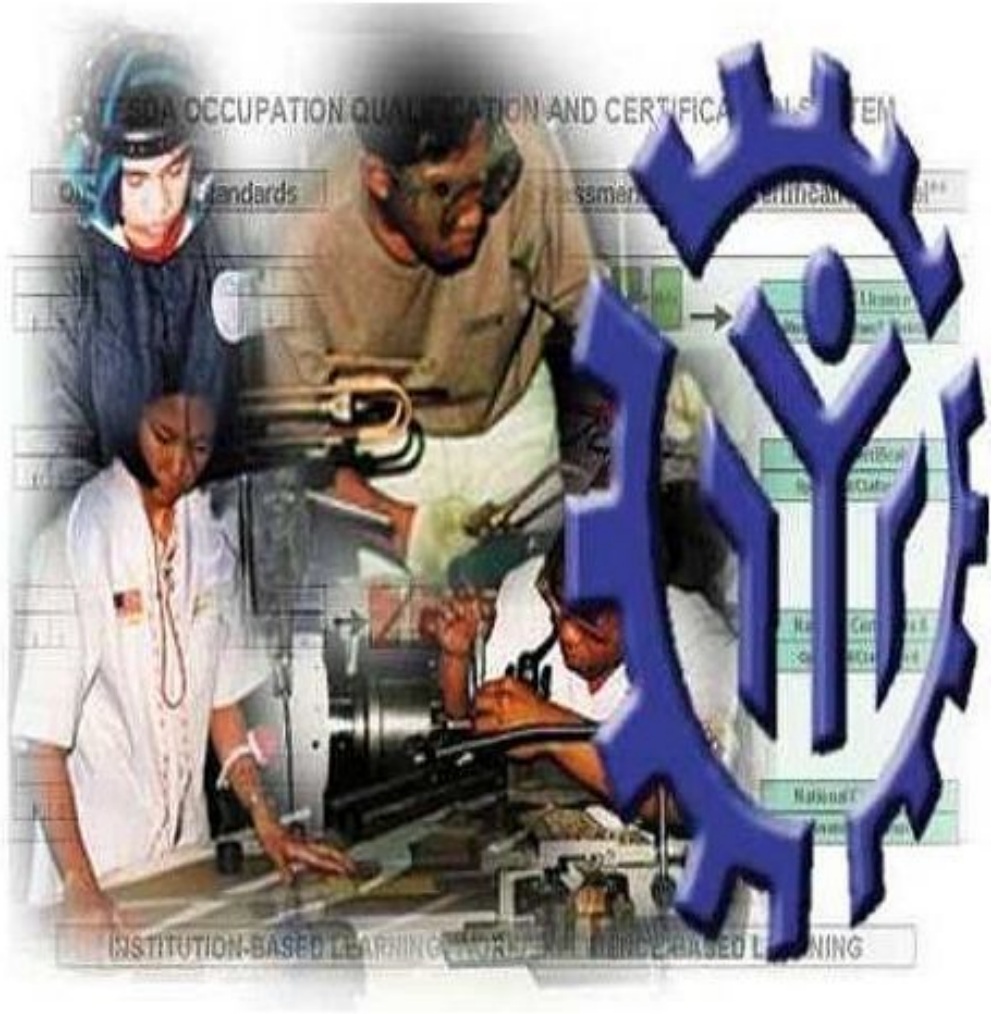
TRAINING REGULATIONS



FISH PRODUCTS PACKAGING NC II

PROCESSED FOOD AND BEVERAGES SECTOR

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
East Service Road, South Superhighway, Taguig City, Metro Manila

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PROCESSED FOOD AND BEVERAGES SECTOR

FISH PRODUCTS PACKAGING NC II

TRAINING REGULATIONS FOR
FISH PRODUCTS PACKAGING NC II

Section 1 FISH PRODUCTS PACKAGING NC II QUALIFICATION

The **Fish Products Packaging NC II** Qualification consists of competencies that a person must achieve to pack fish products by vacuum packing, poly bagging, bottling and canning.

This Qualification is packaged from the competency map of the Processed Food and Beverages Sector as shown in Annex A.

These units of competency comprising this qualification include the following:

Code	BASIC COMPETENCIES
500311105	Participate in workplace communication
500311106	Work in team environment
500311107	Practice career professionalism
500311108	Practice occupational health and safety procedures

Code	COMMON COMPETENCIES
AGR741201	Apply Food Safety and Sanitation
AGR741202	Use Standard Measuring Devices / Instruments
AGR741203	Use Food Processing Tools, Equipment and Utensils
AGR741204	Perform Mathematical Computation
AGR741205	Implement Good Manufacturing Practice Procedure
AGR741206	Implement Environmental Policies and Procedures

Code	CORE COMPETENCIES
AGR826301	Package Processed Fish by Vacuum or Ordinary Poly Packing
AGR826302	Package Processed Fish by Bottling
AGR826303	Package Processed Fish by Canning

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

- **Fish Packaging Worker**

SECTION 2 COMPETENCY STANDARDS

These guidelines are set to provide the Technical Vocational Education and Training (TVET) providers with information and other important requirements to consider when designing training programs for **Fish Products Packaging NC II.** These units of competency are categorized into basic, common and core competencies.

BASIC COMPETENCIES

UNIT OF COMPETENCY : PARTICIPATE IN WORKPLACE COMMUNICATION

UNIT CODE : 500311105

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

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Obtain and convey workplace information	1.1. Specific and relevant information is accessed from ***appropriate sources***
	1.2. Effective questioning , active listening and speaking skills are used to gather and convey information
	1.3. Appropriate ***medium*** is used to transfer information and ideas
	1.4. Appropriate non- verbal communication is used
	1.5. Appropriate lines of communication with supervisors and colleagues are identified and followed
	1.6. Defined workplace procedures for the location and ***storage*** of information are used
	1.7. Personal interaction is carried out clearly and concisely
2. Participate in workplace meetings and discussions	2.1. Team meetings are attended on time
	2.2. Own opinions are clearly expressed and those of others are listened to without interruption
	2.3. Meeting inputs are consistent with the meeting purpose and established ***protocols***
	2.4. ***Workplace interactions*** are conducted in a courteous manner
	2.5. Questions about simple routine workplace procedures and maters concerning working conditions of employment are asked and responded
	2.6. Meetings outcomes are interpreted and implemented

3. Complete relevant work related documents	3.1. Range of ***forms*** relating to conditions of employment are completed accurately and legibly 3.2. Workplace data is recorded on standard workplace forms and documents 3.3. Basic mathematical processes are used for routine calculations 3.4. Errors in recording information on forms/ documents are identified and properly acted upon 3.5. Reporting requirements to supervisor are completed according to organizational guidelines

RANGE OF VARIABLES

VARIABLE	RANGE
1. Appropriate sources	1.1. Team members 1.2. Suppliers 1.3. Trade personnel 1.4. Local government 1.5. Industry bodies
2. Medium	2.1. Memorandum 2.2. Circular 2.3. Notice 2.4. Information discussion 2.5. Follow-up or verbal instructions 2.6. Face to face communication
3. Storage	3.1. Manual filing system 3.2. Computer-based filing system
4. Forms	4.1. Personnel forms, telephone message forms, safety reports
5. Workplace interactions	5.1. Face to face 5.2. Telephone 5.3. Electronic and two way radio 5.4. Written including electronic, memos, instruction and forms, non-verbal including gestures, signals, signs and diagrams
6. Protocols	6.1. Observing meeting 6.2. Compliance with meeting decisions 6.3. Obeying meeting instructions

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Prepared written communication following standard format of the organization 1.2. Accessed information using communication equipment 1.3. Made use of relevant terms as an aid to transfer information effectively 1.4. Conveyed information effectively adopting the formal or informal communication
2. Underpinning Knowledge and Attitudes	2.1. Effective communication 2.2. Different modes of communication 2.3. Written communication 2.4. Organizational policies 2.5. Communication procedures and systems 2.6. Technology relevant to the enterprise and the individual's work responsibilities
3. Underpinning Skills	3.1. Follow simple spoken language 3.2. Perform routine workplace duties following simple written notices 3.3. Participate in workplace meetings and discussions 3.4. Complete work related documents 3.5. Estimate, calculate and record routine workplace measures 3.6. Basic mathematical processes of addition, subtraction, division and multiplication 3.7. Ability to relate to people of social range in the workplace 3.8. Gather and provide information in response to workplace requirements
4. Resource Implications	4.1. Fax machine 4.2. Telephone 4.3. Writing materials 4.4. Internet
5. Methods of Assessment	5.1. Direct Observation 5.2. Oral interview and written test
6. Context of Assessment	6.1. Competency may be assessed individually in the actual workplace or through accredited institution

UNIT OF COMPETENCY: WORK IN TEAM ENVIRONMENT

UNIT CODE : 500311106

UNIT DESCRIPTOR : This unit covers the skills, knowledge and attitudes to identify role and responsibility as a member of a team.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
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
2. Identify own role and responsibility within team	2.1. Individual role and responsibilities within the team environment are identified
	2.2. Roles and responsibility of other team members are identified and recognized
	2.3. Reporting relationships within team and external to team are identified
3. Work as a team member	3.1. Effective and appropriate forms of communications used and interactions undertaken with team members who contribute to known team activities and objectives
	3.2. Effective and appropriate contributions made to complement team activities and objectives, based on individual skills and competencies and ***workplace context***
	3.3. Observed protocols in reporting using standard operating procedures
	3.4. Contribute to the development of team work plans based on an understanding of team's role and objectives and individual competencies of the members.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Role and objective of team	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	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	3.1. Work procedures and practices 3.2. Conditions of work environments 3.3. Legislation and industrial agreements 3.4. Standard work practice including the storage, safe handling and disposal of chemicals 3.5. Safety, environmental, housekeeping and quality guidelines

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1. Operated 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 1.6. Reported outcomes
2. Underpinning Knowledge and Attitude	2.1. Communication process 2.2. Team structure 2.3. Team roles 2.4. Group planning and decision making
3. Underpinning Skills	3.1. Communicate appropriately, consistent with the culture of the workplace
4. Resource Implications	The following resources must be provided: 4.1. Access to relevant workplace or appropriately simulated environment where assessment can take place 4.2. Materials relevant to the proposed activity or tasks
5. Methods of Assessment	Competency may be assessed through: 5.1. Observation of the individual member in relation to the work activities of the group 5.2. Observation of simulation and or role play involving the participation of individual member to the attainment of organizational goal 5.3. Case studies and scenarios as a basis for discussion of issues and strategies in teamwork
6. Context for Assessment	6.1. Competency may be assessed in workplace or in a simulated workplace setting 6.2. Assessment shall be observed while task are being undertaken whether individually or in group

UNIT OF COMPETENCY: PRACTICE CAREER PROFESSIONALISM

UNIT CODE : 500311107

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes in promoting career growth and advancement.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Integrate personal objectives with organizational goals	1.1 Personal growth and work plans are pursued towards improving the qualifications set for the profession 1.2 Intra- and interpersonal relationships ~~is~~ are maintained in the course of managing oneself based on performance ***evaluation*** 1.3 Commitment to the organization and its goal is demonstrated in the performance of duties
2. Set and meet work priorities	2.1 Competing demands are prioritized to achieve personal, team and organizational goals and objectives. 2.2 ***Resources*** are utilized efficiently and effectively to manage work priorities and commitments 2.3 Practices along economic use and maintenance of equipment and facilities are followed as per established procedures
3. Maintain professional growth and development	3.1 ***Trainings and career opportunities*** are identified and availed of based on job requirements 3.2 ***Recognitions*** are sought/received and demonstrated as proof of career advancement 3.3 ***Licenses and/or certifications*** relevant to job and career are obtained and renewed

RANGE OF VARIABLES

VARIABLE	RANGE
1. Evaluation	1.1 Performance Appraisal 1.2 Psychological Profile 1.3. Aptitude Tests
2. Resources	2.1 Human 2.2 Financial 2.3 Technology 2.3.1 Hardware 2.3.2. Software
3. Trainings and career opportunities	3.1 Participation in training programs 3.1.1 Technical 3.1.2 Supervisory 3.1.3 Managerial 3.1.4 Continuing Education 3.2 Serving as Resource Persons in conferences and workshops
4. Recognitions	4.1 Recommendations 4.2 Citations 4.3 Certificate of Appreciations 4.4 Commendations 4.5 Awards 4.6. Tangible and Intangible Rewards
5. Licenses and/or certifications	5.1 National Certificates 5.2 Certificate of Competency 5.3. Support Level Licenses 5.4 Professional Licenses

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Attained job targets within key result areas (KRAs) 1.2. Maintained intra - and interpersonal relationship in the course of managing oneself based on performance evaluation 1.3. Completed training and career opportunities which are based on the requirements of the industries 1.4. Acquired and maintained licenses and/or certifications according to the requirement of the qualification
2. Underpinning Knowledge	2.1 Work values and ethics (Code of Conduct, Code of Ethics, etc.) 2.2 Company policies 2.3 Company-operations, procedures and standards 2.4 Fundamental rights at work including gender sensitivity 2.5 Personal hygiene practices
3. Underpinning Skills	3.1 Appropriate practice of personal hygiene 3.2 Intra and Interpersonal skills 3.3 Communication skills
4. Resource Implications	The following resources must be provided: 4.1. Workplace or assessment location 4.2 Case studies/scenarios
5. Methods of Assessment	Competency may be assessed through: 5.1. Portfolio Assessment 5.2. Interview 5.3. Simulation/Role-plays 5.4. Observation 5.5. Third Party Reports 5.6. Exams and Tests
6. Context of Assessment	6.1. Competency may be assessed in the work place or in a simulated work place setting

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

UNIT CODE : **500311108**

UNIT DESCRIPTOR : This unit covers the outcomes required to comply with regulatory and organizational requirements for occupational health and safety.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Identify hazards and risks	1.1. ***Safety regulations*** and workplace safety and hazard control practices and procedures are clarified and explained based on organization procedures 1.2. ***Hazards/risks*** in the workplace and their corresponding indicators are identified to minimize or eliminate risk to co-workers, workplace and environment in accordance with organization procedures 1.3. ***Contingency measures*** during workplace accidents, fire and other emergencies are recognized and established in accordance with organization procedures
2. Evaluate hazards and risks	2.1. Terms of maximum tolerable limits which when exceeded will result in harm or damage are identified based on threshold limit values (TLV) 2.2. Effects of the hazards are determined 2.3. OHS issues and/or concerns and identified safety hazards are reported to designated personnel in accordance with workplace requirements and relevant workplace OHS legislation

3. Control hazards and risks	3.1. Occupational Health and Safety (OHS) procedures for controlling hazards/risks in workplace are consistently followed 3.2. Procedures for dealing with workplace accidents, fire and emergencies are followed in accordance with organization OHS policies 3.3. ***Personal protective equipment (PPE)*** is correctly used in accordance with organization OHS procedures and practices 3.4. Appropriate assistance is provided in the event of a workplace emergency in accordance with established organization protocol
4. Maintain OHS awareness	4.1. ***Emergency-related drills and trainings*** are participated in as per established organization guidelines and procedures 4.2. ***OHS personal records*** are completed and updated in accordance with workplace requirements

RANGE OF VARIABLES

VARIABLE	RANGE
1. Safety regulations	May include but are not limited to: 1.1. Clean Air Act 1.2. Building code 1.3. National Electrical and Fire Safety Codes 1.4. Waste management statutes and rules 1.5. Philippine Occupational Safety and Health Standards 1.6. DOLE regulations on safety legal requirements 1.7. ECC regulations
2. Hazards/Risks	May include but are not limited to: 2.1 Physical hazards – impact, illumination, pressure, noise, vibration, temperature, radiation 2.2 Biological hazards- bacteria, viruses, plants, parasites, mites, molds, fungi, insects 2.3 Chemical hazards – dusts, fibers, mists, fumes, smoke, gasses, vapors 2.4 Ergonomics 2.4.1. Psychological factors – over exertion/ excessive force, awkward/static positions, fatigue, direct pressure, varying metabolic cycles 2.4.2. Physiological factors – monotony, personal relationship, work out cycle
3. Contingency measures	May include but are not limited to: 3.1. Evacuation 3.2. Isolation 3.3. Decontamination 3.4. (Calling designed) emergency personnel
4. PPE	May include but are not limited to: 4.1 Mask 4.2 Gloves 4.3 Goggles 4.4 Hair Net/cap/bonnet 4.5 Face mask/shield 4.6 Ear muffs 4.7 Apron/Gown/coverall/jump suit 4.8 Anti-static suits

5. Emergency-related drills and training	5.1 Fire drill 5.2 Earthquake drill 5.3 Basic life support/CPR 5.4 First aid 5.5 Spillage control 5.6 Decontamination of chemical and toxic 5.7 Disaster preparedness/management
6. OHS personal records	6.1. Medical/Health records 6.2. Incident reports 6.3. Accident reports 6.4. OHS-related training completed

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Explained clearly established workplace safety and hazard control practices and procedures 1.2. Identified hazards/risks in the workplace and its corresponding indicators in accordance with company procedures 1.3. Recognized contingency measures during workplace accidents, fire and other emergencies 1.4. Identified terms of maximum tolerable limits based on threshold limit value- TLV. 1.5. Followed Occupational Health and Safety (OHS) procedures for controlling hazards/risks in workplace 1.6. Used Personal Protective Equipment (PPE) in accordance with company OHS procedures and practices 1.7. Completed and updated OHS personal records in accordance with workplace requirements
2. Underpinning Knowledge and Attitude	2.1. OHS procedures and practices and regulations 2.2. PPE types and uses 2.3. Personal hygiene practices 2.4. Hazards/risks identification and control 2.5. Threshold Limit Value -TLV 2.6. OHS indicators 2.7. Organization safety and health protocol 2.8. Safety consciousness 2.9. Health consciousness
3. Underpinning Skills	3.1. Practice of personal hygiene 3.2. Hazards/risks identification and control skills 3.3. Interpersonal skills 3.4 Communication skills
4. Resource Implications	The following resources must be provided: 4.1. Workplace or assessment location 4.2. OHS personal records 4.3 PPE 4.4 Health records
5. Methods of Assessment	Competency may be assessed through: 5.1. Portfolio Assessment 5.2. Interview 5.3 Case Study/Situation
6. Context for Assessment	6.1. Competency may be assessed in the work place or in a simulated work place setting

COMMON COMPETENCIES

UNIT OF COMPETENCY: APPLY FOOD SAFETY AND SANITATION

UNIT CODE : AGR741201

UNIT DESCRIPTOR: This unit deals with the skills, knowledge and attitudes required to apply food safety and sanitation in the workplace

ELEMENTS	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Wear Personal Protective Equipment	**1.1** Personal protective equipment are checked according to ***manufacturer's specifications*** 1.2 ***Personal protective equipment*** are worn according to the job requirement
2. Observe Personal Hygiene and Good Grooming	2.1 Personal hygiene and good grooming is practiced in line with ***workplace health and safety requirements***
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.
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.
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

RANGE OF VARIABLES

VARIABLES	RANGE
1. Manufacturer's Specifications	Manufacturer's specifications may include but not limited to: 1.1 Handling 1.2 Operating 1.3 Discharge Label 1.4 Reporting 1.5 Testing 1.6 Positioning 1.7 Refilling
2. Personal Protective Equipment	Personal Protective Equipment may include but not limited to: 2.1 Apron/laboratory gown 2.2 Mouth masks 2.3 Gloves 2.4 Rubber boots/safety shoes 2.5 Head gears such as caps, hair nets, earl plug
3. Workplace Health and Safety Requirements	Workplace 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	Safety measures may include but not limited to: 4.1 Labeling of chemicals and other sanitizing agents 4.2 Installation of fire fighting 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	First Aid Procedures may include but not limited to: 5.1 Mouth to mouth resuscitation 5.2 CPR 5.3 Application of tourniquet 5.4 Applying pressure to bleeding wounds or cuts 5.5 First aid treatment for burned victims
6. Hazards	Hazards in the workplace may include but not limited to: 6.1 Physical 6.2 Biological 6.3 Chemical

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Cleaned, checked and sanitized personal protective equipment 1.2 Practiced proper personal hygiene and good grooming 1.3 Implemented workplace food safety practices 1.4 Applied first aid measures to victims 1.5 Implemented good housekeeping activities in the work area
2. Underpinning Knowledge	2.1 Safety Practices 2.1.1 Proper waste disposal 2.1.2 Environmental protection and concerns 2.1.3 Food safety principles and practices 2.1.4 Good grooming and personal hygiene 2.2 Codes and Regulations 2.2.1 TQM and other food quality system principles 2.2.2 ISO, HACCP, EMS, 5S 2.2.3 Good Food Manufacturing Practices 2.3 Equipment: Uses and Specifications 2.3 1 Parts and functions of personal protective equipment 2.3.2 First Aid Kit 2.3.3 Sanitizing equipment
3. Underpinning Skills	3.1 Sanitary food handling practices 3.2 Implementing housekeeping activities 3.3 Applying first aid treatment 3.4 Coordination skills
4. Resource Implications	The following resources must be provided: 4.1 Work area/station 4.2 First Aid kit 4.3 PPE relevant to the activities 4.4 Fire extinguisher 4.5 Stretcher 4.6 Materials, tools and equipment relevant to the unit of competency
5. Methods of Assessment	Competency in this unit must be assessed through: 5.1 A combination of direct observation and questioning of a candidate processing foods.
6. Context of Assessment	6.1 Assessment should occur on the job or in a simulated workplace

UNIT OF COMPETENCY: USE STANDARD MEASURING DEVICES AND INSTRUMENTS

UNIT CODE : AGR741202

UNIT DESCRIPTOR: This unit deals with the knowledge, skills and attitudes required to use standard measuring devices, instruments in the workplace

ELEMENTS	PERFORMANCE CRITERIA ***Italicized** terms* are elaborated in the Range of Variables
1. Identify Standard Measuring Devices and Instruments	1.1 ***Standard measuring devices and instruments*** are identified according to manufacturer's specifications 1.2 Devices and instruments for measuring are properly checked, sanitized and calibrated prior to use
2. Review the Procedures in Using Standard Measuring Devices and Instruments	2.1 Procedures in using the ***standard measuring devices*** and instruments are recalled according to manufacturer's specifications ***2.2*** Printed procedures/brochures/catalogues are consulted according to specified ***food processing methods***
3. Follow Procedures of Using Measuring Devices and Instruments	3.1 Methods/practices of using measuring devices and instruments are strictly observed according to manufacturer's specifications and workplace requirements 3.2 Measuring devices and instruments are cleaned, wiped dry and stowed after use to ensure conformity with workplace requirements

RANGE OF VARIABLES

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

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Identified, prepared and calibrated standard measuring devices and instruments 1.2 Followed correctly the procedures in using standard measuring devices and instruments 1.3 Followed proper cleaning and sanitizing and stowing procedures of measuring devices and equipment before and after use
2. Underpinning Knowledge	1.1 Safe handling of measuring devices and instruments 1.2 Specifications and functions of measuring devices and instruments 1.3 Defects and breakages of measuring devices and instruments 1.4 Procedures in cleaning, sanitizing and calibrating and stowing equipment and instruments
3. Underpinning Skills	3.1 Communication skills 3.2 Calibrating skills 3.3 Sanitary handling of devices and instruments 3.4 Measuring devices and instruments 3.5 Stowing measuring devices and instruments
4. Resource Implications	The following resources must be provided: 4.1 Work area/station 4.2 Materials, tools and equipment relevant to the Unit of Competency
5. Methods of Assessment	Competency in this unit must be assessed through: 5.1 Direct observation and questioning of a candidate using measuring devices and instruments
6. Context of Assessment	6.1 Assessment should occur on the job or in a simulated workplace

UNIT OF COMPETENCY: USE FOOD PROCESSING TOOLS, EQUIPMENT AND UTENSILS

UNIT CODE : AGR741203

UNIT DESCRIPTOR: This unit deals with the skills, knowledge and attitudes required to operate food processing tools, equipment and instruments in the workplace.

ELEMENTS	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Perform Pre-Operation Activities	1.1 Appropriate tools and equipment/utensils are assembled according to ***food processing methods*** 1.2 ***Food processing tools and equipment/utensils*** are inspected and checked according to manufacturer's specifications 1.3 Food processing equipment is set up, adjusted and readied according to job requirements
2. Operate Food processing Equipment	2.1 Food processing equipment is switched on according to ***manufacturer's specifications*** 2.2 Performance of food processing equipment is checked to ensure conformity with specified output 2.3. Operation of food processing equipment is managed to achieve planned outcomes 2.4. Minor trouble shooting on food processing tools, equipment and utensils is performed when necessary
3. Perform Post-Operation Activities	3.1 Food processing equipment is switched off and unplugged after operation in accordance with manufacturer's specifications 3.2 Food processing tools, equipment and instruments are cleaned, sanitized and stowed as required according to manufacturer's specifications and workplace policies and regulations 3.3 ***Minor preventive maintenance*** on equipment is performed in line with organization's maintenance system 3.4 Main machine parts are inspected and checked in line with organization's policy 3.5 ***Condition of machine*** is monitored to ensure serviceability in accordance with workplace rules and regulation

RANGE OF VARIABLES

VARIABLES	RANGE
1. Food Processing Methods	Food Processing Methods include: 1.1 Salting 1.2 Curing 1.3 Smoking 1.4 Fermentation 1.5 Pickling 1.6 Canning 1.7 Bottling 1.8 Sugar concentration 1.9 Drying 1.10 Dehydration
2. Food Processing Tools, Equipment and Utensils	Tools, Equipment and Utensils may include but not limited to: 2.1 Cold storage equipment like chiller, refrigerator, freezer 2.2 Jack lifts and trolleys 2.3 Weighing scale of various capacities and sensitivities 2.4 Smokehouse 2.5 Oven 2.6 Fermentation vats 2.7 Sealers (can and plastic) 2.8 Cutting implements such as knives, peelers, slicer, cutter 2.9 Kitchen utensils like casserole, colanders, bowls, food tongs 2.10 Strainers, basting spoon paddle, steamer exhauster 2.11 Exhaust box, steam jacketed kettle lifter, wire baskets, chopping boards, vegetable cutter, osterizer

3. Manufacturer's Specifications	Manufacturer's specifications may include but not limited to: 3.1 Handling requirements 3.2 Operating requirements 3.3 Discharge Label 3.4 Reporting 3.5 Testing 3.6 Positioning 3.7 Refilling
4. Minor Preventive Machine Maintenance	Minor Preventive Machine Maintenance may include but not limited to checking of the following: 4.1 Machine temperature 4.2 Hydraulic fluid 4.3 Wear and surface condition 4.4 Crack 4.5 Leak detection 4.6 Vibration 4.7 Corrosion/erosion 4.8 Electric insulation
5. Condition of Machine	5.1 Serviceable 5.2 Repairable 5.3 Defective

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Assembled, inspected, checked and sanitized appropriate tools and equipment/instruments 1.2 Set-up, adjusted and readied tools and equipment and instruments according to requirements 1.3 Operated and monitored performance of equipment to ensure specified output 1.4 Performed post operation activities 1.5 Performed minor trouble shooting on food processing tools, equipment and utensils
2. Underpinning Knowledge	2.1 Equipment, tools and instruments: Uses and Specifications 2.2 Equipment, tools and instruments: Parts and Functions 2.3 Sanitizing agents: Uses and Specification 2.4 Minor preventive maintenance 2.5 Proper stowing of tools and equipment/instruments 2.6 Minor trouble shooting 2.5 Interpreting manufacturer's specifications 2.6 Equipment/machine wear and tear process
3. Underpinning Skills	3.1 Equipment/machine parts tear down and assembly 3.2 Inspecting and checking condition of equipment/machines before, during and after operation 3.3 Performing minor trouble shooting 3.4 Performing minor preventive maintenance 3.5 Reporting equipment/machine, tools, instruments breakdown and recording same in standard forms
4. Resource Implications	The following resources must be provided: 4.1 Work area/station 4.2 Materials, tools and equipment relevant to the Unit of Competency
5. Methods of Assessment	Competency in this unit must be assessed through: 5.1 Direct observation and questioning of a candidate operating food processing tools and equipment/instruments 5.2 Submission of written report on the performance and condition of equipment/machine, tools, instruments used.
6. Context of Assessment	6.1 Assessment should occur on the job or in a simulated workplace

UNIT OF COMPETENCY : PERFORM MATHEMATICAL COMPUTATIONS

UNIT CODE : AGR741204

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

ELEMENTS	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Gather and Tabulate the Recorded Data	1.1 Records of ***weights and measurements*** of raw materials and ingredients are gathered and summarized according to workplace standard operating procedures 1.2 Records of weights and measurements of finished processed products are gathered and summarized according to workplace standard operating procedures 1.3 Summarized data are tabulated according to enterprise requirements
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

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 3.2 Data on actual yields and recoveries and corresponding percentage equivalents are calculated according to enterprise requirements 3.3 All calculated data are recorded according to enterprise requirements
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

RANGE OF VARIABLES

VARIABLES	RANGE
1. Weights and Measurements	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	Costs of production are computed using the following: 2.1 Ingredient formulation 2.2 Percentage formulation 2.3 Conversion 2.4 Ratios and proportion 2.7 Spoilage and rejects and corresponding percentages 2.8 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. Underpinning Knowledge	2.1 Mensuration 2.2 Percentage formulation 2.3 Fraction, ratios and proportions 2.5. Basic Mathematical Operations 2.6. Conversion factors
3. Underpinning Skills	3.1 Basic Mathematical skills 3.2 Basic Accounting skills 3.3 Recording skills 3.4 Data Gathering skills
4. Resource Implications	The following resources must be provided: 4.1 Work area/station 4.2 Materials relevant to recording and documentation of production data 4.3 Computer with printer and software 4.4 Calculator 4.5 Work table
5. Methods of Assessment	Competency in this unit must be assessed through: 5.1 A combination of direct observation and questioning of a candidate computing costs of production 5.2 Submission of a written report showing a record of production data including raw data
6. Context of Assessment	6.1 Assessment should occur on the job or in a simulated workplace

UNIT OF COMPETENCY: IMPLEMENT GOOD MANUFACTURING PRACTICE AND PROCEDURES

UNIT CODE : AGR741205

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

ELEMENTS	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables
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
2. Observe personal hygiene and conduct to meet GMP requirements	2.1. Personal hygiene meets GMP requirements 2.2. Clothing is prepared, used, stored and disposed of according to GMP and workplace procedures 2.3. Personal movement around the workplace complies with area entry and exit procedures
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 standards
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

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
6. Complete workplace documentation to support GMP	6.1. Documentation and recording requirements are identified 6.2. Information is recorded according to ***workplace reporting procedures*** to meet GMP requirements

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 in carried out in accordance with regulations. 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. Products, raw materials, packaging components and consumables, part-processed product, finished product and cleaning materials
6. Responsibility and reporting systems	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

1. Critical aspects of Competency	Assessment requires evidences that the candidate : 1.1. Located and followed workplace information relating to GMP responsibilities 1.2. Maintained personal hygiene consistent with GMP 1.3. Followed workplace procedures when moving around the workplace and/or from one task to another to maintain GMP 1.4. Used, stored and disposed of appropriate clothing/footwear as required by work tasks and consistent with GMP 1.5. Identified and reported situations that do or could compromise GMP 1.6. Applied appropriate control measures to control contamination 1.7. Recorded results of monitoring, and maintain records as required by GMP 1.8. Followed validation procedures within level of responsibility 1.9. Identified and responded to out-of-specification or unacceptable raw materials, packaging components, final or part processed product within level of responsibility 1.10. Followed procedures to isolate or quarantine non-conforming product 1.11. Handled, cleaned and stored equipment, utensils, raw materials, packaging components and related items according to GMP and workplace procedures 1.12. Maintained GMP for own work 1.13. Handled and/or disposed of out-of-specification or contaminated materials, packaging components/consumables and product, waste and recyclable material according to GMP as required by work responsibilities 1.14. Maintained the work area in a clean and tidy state 1.15. Identified and reported signs of pest infestation

2. Underpinning Knowledge and Attitudes	2.1. The role of GMP in preventing contamination, its relationship to legislative responsibilities and potential implications of non-compliance 2.2. GMP arrangements in the workplace. This includes awareness of relevant GMP codes of practice and related workplace policies and procedures to implement these responsibilities 2.3. The relationship between GMP and the quality system, personnel responsible for designing and managing GMP, personal role to maintain GMP, the role of internal and external auditors as appropriate 2.4. Procedures followed to investigate contamination events and performance improvement processes 2.5. Personal clothing and footwear requirements for working in and/or moving between work areas 2.6. Personal clothing use, storage and disposal requirements 2.7. Awareness of common micro biological, physical and chemical contaminants relevant to the work process. This includes the types of contamination likely to occur, the conditions under which they occur, possible consequences and control methods to prevent occurrence 2.8. Basic concepts of quality assurance including quality specifications, operating parameters, validation procedures and control methods. This includes an understanding of related documentation including Standard Operating Procedures and/or batch instructions 2.9. Control methods and procedures used in the work area to maintain GMP. This includes an understanding of the purpose of control, the consequences if not controlled and the method of control where relevant. It may include an understanding of methods used to monitor process control; purpose and requirements of validation procedures; and purpose of equipment calibration 2.10. GMP responsibilities and requirements relating to work role

	2.11. Basic understanding of the properties, handling and storage requirements of raw materials, packaging components and final product handled and used 2.12. Standards for materials, equipment and utensils used in the work area 2.13. Recall and traceability procedures relevant to work role 2.14. Procedures for responding to out-of-specification or unacceptable performance/outcomes. This includes procedures for identifying or isolating materials or product of unacceptable quality 2.15. Purpose of keeping records and the recording requirements of GMP. This includes an understanding of product and materials traceability procedures 2.16. Housekeeping requirements and responsibilities relating to own work. Where relevant this includes use and storage of housekeeping/cleaning equipment 2.17. Waste collection, recycling and handling procedures relevant to own work responsibilities 2.18. Responsibilities for reporting and recording quality information
3. Underpinning Skills	3.1. Planning and organizing work (time management) 3.2. Working with others and in teams
4. Resource Implication	The following resources must be provided: 4.1. Workplace location and access to workplace policies 4.2. Materials relevant to the proposed activity and tasks
5. Methods of Assessment	Competency in this unit must be assessed using at least two (2) of the following methods: 5.1. A combination of direct observation and oral questioning 5.2. Written report 5.3. Written Test 5.4. Portfolio
6. Context of Assessment	6.1. Assessment should occur on the job or in a simulated workplace

UNIT OF COMPETENCY: IMPLEMENT ENVIRONMENTAL POLICIES AND PROCEDURES

UNIT CODE : AGR741206

UNIT DESCRIPTOR: This unit deals with the skills, knowledge and attitudes required to implement environmental policies and procedures when carrying out work responsibilities

ELEMENTS	PERFORMANCE CRITERIA ***Italicized** terms* are elaborated in the Range of Variables
1. Conduct work in accordance with environmental policies and procedures	1.1. Immediate work area is routinely checked to ensure compliance with environmental requirements 1.2. ***Hazards*** and unacceptable performance are identified, removed and/or reported to appropriate personnel according to workplace procedures 1.3. Workplace procedures and work instructions are followed 1.4. Where control requirements are not met, incidents are promptly reported and corrective action is taken 1.5. Measures used to minimize and handle waste are followed 1.6. Environmental data is recorded in required format according to workplace reporting requirements
2. Participate in improving environmental practices at work	2.1. Processes or conditions which could result in an unacceptable environmental outcome are identified and reported according to workplace reporting requirements 2.2. Corrective action is taken in accordance with the environmental management and emergency response plans as required 2.3. Contributions are made to a participative arrangements for managing environmental issues in the workplace within workplace procedures and level of responsibility
3. Respond to an environmental emergency	3.1. Emergency situations are identified and reported according to workplace reporting requirements 3.2. Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures

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 in carried out in accordance with regulations. 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. Identification and control of hazards may include:	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 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	Assessment requires evidences that the candidate : 1.1. Accessed and apply workplace information on environmental policies and procedures relating to own work 1.2. Fitted and used appropriate personal protective clothing and equipment 1.3. Checked own work area to identify environmental hazards 1.4. Reported hazards according to workplace procedure in a clear and timely manner 1.5. Followed work procedures to control or minimize environmental risk. This may include monitoring parameters set for environmental aspects such as airborne particulate, noise, and water quality. It may also include demonstrating use of emergency equipment according to work role requirements 1.6. Recorded environmental information as required by the environmental management program 1.7. Participated in processes to raise issues and suggestions to improve environmental issues management. This requires appropriate communication skills to structure and present information and interact with others 1.8. Followed procedures to collect, deposit, recycle and/or dispose of waste in own work area 1.9. Followed procedures to respond to environmental emergencies such as spills and emissions. This may include following procedures to alert the appropriate emergency services 1.10. Maintained housekeeping standards in work area

2. Underpinning Knowledge and Attitudes	2.1. Workplace approach to managing environmental issues. This includes awareness of relevant work procedures, personnel responsible for environmental issues, consultative arrangements for reporting and improving environmental practices and may include an understanding of the role of internal and external auditors as appropriate 2.2. Responsibilities of self and employer to manage environmental issues on site. This includes an awareness of any license or agreements in place with resource management authorities and the purpose of these arrangements 2.3. Sources of advice on environmental issues in the workplace 2.4. Environmental hazards and risks associated with the work carried out. Examples may include water pollution, air pollution, noise, waste handling, emergencies such as spills, and hazardous chemicals or waste 2.5. Work procedures as they relate to environmental responsibilities. This includes use of appropriate personal protective clothing and equipment as required 2.6. Procedures used to prevent or control environmental risks associated with own work. Where this requires use of emergency equipment, this includes understanding the purpose, capacity and limitations of equipment, location and storage requirements and safe handling and equipment use 2.7. Basic concepts of hazard identification, risk assessment and control options. This includes an understanding of the hierarchy of hazard control 2.8. Workplace procedures for identifying and responding to hazards, investigating incidents and improving environmental management and resource utilisation 2.9. Impact of work practices on resource utilisation and wastage

	2.10. Procedures used to handle and dispose of waste according to workplace requirements. This includes an awareness of the need to separate solid and liquid waste, and remove waste in solid form rather than hosing down drains. It may also include an understanding of handling requirements for hazardous waste 2.11. The difference between trade waste and storm water drains 2.12. Consequences of inappropriate waste handling and disposal 2.13. Procedures for responding to unplanned incidents such as spills and leaks as relevant to the work area 2.14. Emergency response system and procedures 2.15. Responsible use of resources in own work area 2.16. Reporting procedures and responsibilities 2.17. Consultative processes in the workplace for raising issues/suggestions on environmental issues
3. Underpinning Skills	3.1. Planning and organizing work (time management) 3.2. Working with others and in teams
4. Resource Implication	The following resources must be provided: 4.1. Workplace location and access to workplace policies 4.2. Materials relevant to the proposed activity and tasks
5. Methods of Assessment	Competency in this unit must be assessed using at least two (2) of the following methods: 5.1. A combination of direct observation and oral questioning 5.2. Written report 5.3. Written Test 5.4. Portfolio
6. Context of Assessment	6.1. Assessment should occur on the job or in a simulated workplace

CORE COMPETENCIES

UNIT OF COMPETENCY: PACKAGE PROCESSED FISH BY VACUUM OR ORDINARY POLY-PACKING

UNIT CODE : AGR826301

UNIT DESCRIPTOR : This unit deals with the knowledge, skills and attitudes required to package processed fish by vacuum or ordinary poly-packing. It also encompasses understanding of the different fish processing steps such as exhausting, retorting and cooling.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Inspect Packaging Materials, Tools and Equipment	1.1 ***Packaging materials*** are inspected for visual ***defects*** and reported to supervisor for appropriate action. 1.2 ***Packaging equipment and tools*** for vacuum or ordinary poly packing is checked for the required settings in accordance with established standards. 1.3 Packaging materials and equipment are sanitized according to standard operating procedures. 1.4 Breakdown in packaging equipment are reported to supervisor for appropriate action. 1.5 Labels of packaging materials are checked for required ***information*** to ensure conformity with company's regulations and Bureau of Food and Drugs (BFAD) requirements. 1.6 Required documentation for packaging materials, tools and equipment is completed according to workplace requirements.

ELEMENT	PERFORMANCE CRITERIA
2. Perform Inner Packaging of Processed Fish Products	2.1 ***Processed fish products*** after ***preparatory operations*** are inspected visually for normal ***characteristics*** in accordance with manufacturer's specifications. 2.2 Downgraded/Rejected processed fish products are disposed according to company's policy. 2.3 Processed fish products are weighed in accordance with approved specifications. 2.4 Processed fish products are bagged according to prescribed packaging materials. 2.4 Packaging material with fish products are sealed as required. 2.5 Packaged fish products after passing through metal detector are placed in inner carton and labeled in accordance to manufacturer's specification.
3. Perform Outer Packaging Procedures	3.1 Packaged processed fish products are filled in master carton according to established requirements. 3.2 Packaged fish products in cartons are strapped and transferred to pallet for storing according to specifications. 3.3 Packaged fish products are checked of certain ***conditions*** in accordance to established standards. 3.4 Random sampling is conducted prior to storage. 3.5 Packaged fish products are labeled and stored according to required temperature.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Packaging Materials	Packaging materials may include but not limited to: 1.1 Plastic bags (single film/laminates) 1.2 Cartons (master/inner) 1.3 Carton straps 1.4 Trays 1.5 Packing tapes
2. Defects	Defects may include but not limited to: 2.1 Foreign matter 2.2 Dirt/Unclean 2.3 Holes 2.4 Improper label
3. Packaging Equipment and Tools	Packaging equipment may include but not limited to: 3.1 Weighing scales 3.2 Thermometer 3.3 Heat sealer 3.4 Vacuum sealer 3.5 Strapping 3.6 Shrink wrapping 3.7 Labeling machines 3.8 Tape/Adhesive dispenser
4. Information	Information may include but not limited to: 4.1 Production date 4.2 Best before date 4.3. Ingredients 4.4. Brand 4.5 Quantity of Content 4.6 Storage requirements 4.7 Nutritional Facts
5. Processed Fish Products	5.1 Fresh 5.2 Frozen 5.3. Dried 5.4 Smoked 5.5 Individually Quick Frozen In the following forms: 5.6 Whole 5.7 Fillet 5.8 Block 5.9 Belly 5.10 Steak
6. Preparatory Operations	6.1 Wash 6.2 Eviscerate 6.3 Cut 6.4 Clean

VARIABLE	RANGE
7. Characteristics	Fresh and frozen form: 7.1 Unbroken heads, tails 7.2. Clear and bright eyes 7.3 No foreign materials 7.4 Shiny skin 7.5 Bright natural coloring 7.6 Sea-fresh smell 7.7 Neat, trim fillets with firm flesh 7.8 No discoloration 7.9 Pleasant smell 7.10 Frozen hard with no signs of thawing Dried and smoked form: 7.11 Bright, gloomy appearance 7.12 Firm texture 7.13 No molds, dried blood, and salt crystals 7.14 Clean, smoky odor
8. Conditions	8.1 Package/Container inspection 8.2 Fish product spoilage and damage 8.3 Proper label

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Inspected appropriate packaging materials and equipment according to workplace requirements 1.2 Sanitized packaging materials, tools and equipment according to standard operating procedures 1.3 Labeled packaging material according to company's regulations and BFAD requirements 1.4 Reported breakdowns and completed documentation in packaging equipment according to workplace procedures 1.5 Packaged processed fish products according to quality and safety standards 1.6 Checked condition of packaged fish products according to established standards 1.7 Properly and safely stored the labeled packaged fish product according to temperature requirements
2. nderpinning Knowledge	2.1 Safety Practices 2.1.1 Proper waste disposal 2.1.2 Environmental protection and concerns 2.1.3 Fish products safety principles and practices 2.1.4 Fish products handling practices 2.1.5 Good grooming & personal hygiene 2.2 Communication 2.2.1 Recording and documenting of production data 2.2.2 Reporting of defects/breakdown to immediate head/supervisor 2.3 Mathematics and Measurements 2.3.1 Weights, measure, conversions 2.3.2 Basic accounting procedures 2.3.3 Ratios, proportions and percentages 2.3.4 Basic mathematical operations 2.4 Codes & Regulations 2.4.1 Good quality system principles 2.4.2 ISO, HACCP, SSOP 2.4.3 Good Manufacturing Practices 2.4.4 BFAD 2.5 Materials & Equipment: Uses and Specifications 2.5.1 Packaging materials and labels 2.5.2 Packaging equipment 2.6 Systems, Processes and Operations 2.6.1 Packaging procedure and techniques 2.6.2 Labeling procedures and techniques 2.6.3 Using various packaging equipment

3. Underpinning Skills	3.1 Oral & written communication skills 3.2 Sanitary handling practices 3.3 Package checks and inspection 3.4 Recording and reporting skills
4. Resource Implications	The following resources must be provided: 4.1 Work area/station 4.2 Equipment used to package processed fish products 4.3 Materials relevant to the proposed activity and tasks
5. Methods of Assessment	Competency must be assessed through: 5.1 Direct observation with oral questioning 5.2 Portfolio (submission of work samples) 5.3 Demonstration with oral questioning
6. Context of Assessment	6.1 Assessment should occur on the job or in a simulated workplace

UNIT OF COMPETENCY: **PACKAGE PROCESSED FISH BY BOTTLING**

UNIT CODE **: AGR826302**

UNIT DESCRIPTOR **:** This unit deals with the knowledge, skills and attitudes required to package processed fish by bottling. It also encompasses understanding of the different fish-processing steps such as exhausting, retorting and cooling.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Inspect Packaging Materials, Tools and Equipment	1.1. ***Packaging materials*** are inspected for visual ***defects*** and reported to supervisor for appropriate action. 1.2. Packaging materials, tools and equipment are sanitized according to standard operating procedures. 1.3. ***Packaging equipment*** for bottling is checked for the required settings in accordance with standard operating procedures. 1.4. Breakdown in packaging equipment are reported to supervisor for appropriate action. 1.5. Required documentation for packaging materials, tools and equipment is completed according to workplace requirements.
2. Perform Bottling of Processed Fish	2.1 ***Processed fish products*** after ***preparatory operations*** are inspected visually for normal ***characteristics*** in accordance with manufacturer's specifications. 2.2 Downgraded/Rejected processed fish products are disposed according to company's policy. 2.3 Processed fish are filled in bottles and added with ***ingredients*** according to specifications. 2.4 Sealing compound of caps are checked prior to sealing. 2.5 Bottles are sealed immediately after exhausting to meet the required temperature as per established practice. 2.6 Bottled fish products are tamper proof sealed (if applicable) after retorting and cooling according to approved specifications. 2.7 Bottled fish products are appropriately labeled with ***information*** in accordance to manufacturer's specifications.

ELEMENT	PERFORMANCE CRITERIA
3. Perform Post-Bottling Procedures	3.1 Bottled fish products are filled in master carton and sealed according to specifications. 3.2 Packaged fish products in cartons are strapped and transferred to pallet for storing according to specifications. 3.3 Bottled fish products are checked of certain ***conditions*** in accordance to established standards. 3.4 Random sampling is conducted prior to storage. 3.5 Packaged fish products are labeled and stored according to required temperature.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Packaging Materials	Packaging materials may include but not limited to: 1.1 Glass containers 1.2 Caps 1.3 Tamper proof seal 1.4 Cartons(master) 1.5 Carton strap
2. Defects	Defects may include but not limited to: 2.1 Crizzle fin 2.2 Bent neck 2.3 Offset 2.4 Chip 2.6 Thin shoulder 2.7 Stone 2.8 Dirt 2.9 Broken caps
3. Packaging Equipment	Bottling equipment may include but not limited to: 3.1 Weighing scales 3.2 Plastic sealer 3.3 Strapping 3.4 Tape/Adhesive dispenser
4. Processed Fish	4.1 Steamed 4.2 Smoked 4.3 Dried 4.4 Fried 4.5 Salted
5. Preparatory Operations	5.1 Wash 5.2 Eviscerate 5.3 Cut 5.4 Clean 5.5 Drip dry
6. Characteristics	6.1 No head 6.2 No tail 6.3 No foreign materials 6.4 No discoloration 6.5 Pleasant smell
7. Ingredients	7.1 Carrots 7.2 Peppercorn 7.3 Chili 7.4 Salt 7.5 Bay leaf 7.6 Pickles 7.7 Cloves 7.8 Monosodium glutamate

VARIABLE	RANGE
8. Information	Information may include but not limited to: 8.1 Production date 8.2 Best before date 8.3. Ingredients 8.4. Brand 8.5 Quantity of Content 8.6 Nutritional Facts
9. Conditions	9.1 Package/Container inspection 9.2 Fish product spoilage and damage 9.3 Proper label

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Inspected appropriate packaging materials and equipment according to workplace requirements 1.2 Sanitized packaging materials and equipment according to standard operating procedures 1.3 Reported breakdowns and completed documentation in packaging equipment according to workplace procedures 1.4 Packaged processed fish product according to specifications under food quality and safety standards 1.5 Labeled packaging material according to company's regulations and BFAD requirements 1.6 Checked condition of processed fish product according to established standards 1.7 Properly and safely stored the processed fish product according to temperature requirements.
2. Underpinning Knowledge	2.1 Safety Practices 2.1.1 Proper waste disposal 2.1.2 Environmental protection and concerns 2.1.3 Fish products safety principles and practices 2.1.4 Fish products handling practices 2.1.5 Good grooming & personal hygiene 2.2 Communication 2.2.1 Recording and documenting of production data 2.2.2 Reporting of defects/breakdown to immediate head/supervisor 2.3 Mathematics and Measurements 2.3.1 Weights, measure, conversions 2.3.2 Basic accounting procedures 2.3.3 Ratios, proportions and percentages 2.3.4 Basic mathematical operations 2.4 Codes & Regulations 2.4.1 Good quality system principles 2.4.2 ISO, HACCP, SSOP 2.4.5 Good Manufacturing Practices 2.4.6 BFAD 2.5 Materials, Tools & Equipment: Uses and Specifications 2.5.1 Packaging materials 2.5.2 Packaging equipment 2.5.3 Labeling materials 2.6 Systems, Processes and Operations 2.6.1 Packaging procedure and techniques 2.6.2 Labeling procedures and techniques 2.6.3 Using various packaging equipment and tools 2.6.4 Exhausting, Retorting and Cooling

3. Underpinning Skills	3.1 Oral & written communication skills 3.2 Sanitary handling practices 3.3 Package checks and inspection 3.4 Recording and reporting skills
4. Resource Implications	The following resources must be provided: 4.1 Work area/station 4.2 Equipment used to package processed fish products 4.3 Materials relevant to the proposed activity and tasks
5. Methods of Assessment	Competency must be assessed through: 5.1 Direct observation with oral questioning 5.2 Portfolio (submission of work samples) 5.3 Demonstration with oral questioning
6. Context of Assessment	6.1 Assessment should occur on the job or in a simulated workplace

UNIT OF COMPETENCY: **PACKAGE PROCESSED FISH BY CANNING**

UNIT CODE **: AGR826303**

UNIT DESCRIPTOR **:** This unit deals with the knowledge, skills and attitudes required to package processed fish by canning. It also encompasses understanding of the different fish processing steps such as exhausting, retorting and cooling.

ELEMENT	PERFORMANCE CRITERIA ***Italicized*** terms are elaborated in the Range of Variables
1. Inspect Packaging Materials, Tools and Equipment	1.1 ***Packaging materials*** are inspected for visual ***defects*** and reported to supervisor for appropriate action. 1.2 Packaging materials, tools and equipment are sanitized according to standard operating procedures. 1.3 ***Packaging equipment*** for canning is checked for the required settings in accordance with standard operating procedures. 1.4 Breakdown in packaging equipment are reported to supervisor for appropriate action. 1.5 Required documentation for packaging materials, tools and equipment is completed according to workplace requirements.
2. Perform Canning of Processed Fish	2.1 ***Processed fish products*** after ***preparatory operations*** are inspected visually for normal ***characteristics*** in accordance with manufacturer's specifications. 2.2 Downgraded/Rejected processed fish products are disposed according to company's policy. 2.3 Processed fish are filled in cans and added with ***ingredients*** according to specifications. 2.4 Lids with sealing compound are checked prior to sealing. 2.5 Cans are sealed immediately after exhausting to meet the required temperature as per established practice. 2.6 Cans is checked for visual defects after sealing, retorting and cooling according to established requirements. 2.7 Canned fish products are labeled with ***information*** in accordance to manufacturer's specifications.

ELEMENT	PERFORMANCE CRITERIA
3. Perform Post - Packaging Procedures	3.1 Canned fish products are filled in master carton and sealed according to specifications. 3.2 Packaged fish products in cartons are strapped and transferred to pallet for storing according to specifications. 3.3 Canned fish products are checked for certain ***conditions*** in accordance to established standards. 3.4 Random sampling is conducted prior to storage 3.5 Packaged fish products are labeled and stored according to required temperature.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Packaging Materials	Packaging materials may include but not limited to: 1.1 Metal can 1.2 Can lid 1.3 Carton (master) 1.4 Carton strap
2. Defects	Defects may include but not limited to: Lamination Pinhole Damaged flange Blisters Pleated necks Scratched print Lining defects
3. Packaging Equipment	Canning tools and equipment may include but not limited to: Weighing scales Can sealer Strapping Tape/Adhesive dispenser
4. Processed fish	4.1 Steamed 4.2 Smoked 4.4 Dried 4.5 Fried 4.5 Salted 4.6 Fresh
5. Preparatory Operations	5.1 Wash 5.2 Eviscerate 5.3 Cut 5.4 Clean 5.5 Drip dry
6. Characteristics	6.1 No foreign materials 6.2 No discoloration 6.3 Pleasant smell
7. Ingredients	7.1 Oil 7.2 Tomatoes 7.3 Salt 7.4 Bay leaf 7.5 Pickles 7.6 Vegetable broth

VARIABLE	RANGE
8. Information	Information may include but not limited to: 8.1 Production date 8.2 Best before date 8.3. Ingredients 8.4. Brand 8.5 Quantity of Content 8.6 Nutritional Facts
9. Conditions	9.1 Package/Container inspection 9.2 Fish product spoilage and damage 9.3 Proper label

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Inspected appropriate packaging materials and equipment according to workplace requirements 1.2 Sanitized packaging materials and equipment according to standard operating procedures 1.3 Reported breakdowns and completed documentation in packaging equipment according to workplace procedures 1.4 Packaged processed fish product according to specifications under food quality and safety standards 1.5 Labeled packaging material according to company's regulations and BFAD requirements 1.6 Checked condition of processed fish product according to established standards 1.7 Properly and safely stored the processed fish product according to temperature requirements.
2 Underpinning Knowledge	2.1 Safety Practices 2.1.1 Proper waste disposal 2.1.2 Environmental protection and concerns 2.1.3 Fish products safety principles and practices 2.1.4 Fish Products handling practices 2.1.5 Good grooming & personal hygiene 2.2 Communication 2.2.1 Recording and documenting of production data 2.2.2 Reporting of defects/breakdown to immediate head/supervisor 2.3 Mathematics and Measurements 2.3.1 Weights, measure, conversions 2.3.2 Basic accounting procedures 2.3.3 Ratios, proportions and percentages 2.3.4 Basic mathematical operations 2.4 Codes & Regulations 2.4.1 Good quality system principles 2.4.2 ISO, HACCP, SSOP 2.4.7 Good Manufacturing Practices 2.4.8 BFAD 2.5 Materials, Tools & Equipment: Uses and Specifications 2.5.1 Packaging materials 2.5.2 Packaging equipment 2.5.3 Labeling materials 2.6 Systems, Processes and Operations 2.6.1 Packaging procedure and techniques 2.6.2 Labeling procedures and techniques 2.6.3 Using various packaging equipment and tools

3 Underpinning Skills	3.1 Oral & written communication skills 3.2 Sanitary handling practices 3.3 Package checks and inspection 3.4 Recording and reporting skills
4. Resource Implications	The following resources must be provided: 4.1 Work area/station 4.2 Equipment used to package processed fish products 4.3 Materials relevant to the proposed activity and tasks
5. Methods of Assessment	Competency must be assessed through: 5.1 Direct observation with oral questioning 5.2 Portfolio (submission of work samples) 5.3 Demonstration with oral questioning
6. Context of Assessment	6.1 Assessment should occur on the job or in a simulated workplace

SECTION 3 TRAINING STANDARDS

These guidelines are set to provide the Technical and Vocational Education and Training (TVET) providers with information and other important requirements to consider when designing training programs for **FISH-PRODUCTS PACKAGING NC II**.

3.1 CURRICULUM DESIGN

Course Title: **FISH-PRODUCTS PACKAGING** NC Level: **NC II**

Nominal Training Duration: 18 Hours (Basic)
14 Hours (Common)
120 Hours (Core)
152 Hours (Total)

Course Description:

This course is design to enhance the knowledge, skills and attitudes in **FISH-PRODUCTS PACKAGING NC II** in accordance with industry standards. It covers Basic, Common and Core Competencies.

To obtain this, all units prescribed for this qualification must be achieved:

BASIC COMPETENCIES

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Participate in workplace communication	1.1 Obtain and convey workplace information 1.2 Complete relevant work related documents 1.3 Participate in workplace meeting and discussion	• Group discussion • Interaction	• Demonstration • Observation • Interviews/ questioning
2. Work in a team environment	2.1 Describe and identify team role and responsibility in a team 2.2 Describe work as a team member	• Discussion • Interaction	• Demonstration • Observation • Interviews/ questioning
3. Practice career professionalism	3.1 Integrate personal objectives with organizational goals 3.2 Set and meet work priorities 3.3 Maintain professional growth and development	• Discussion • Interaction	• Demonstration • Observation • Interviews/ questioning

4. Practice occupational health and safety procedures	4.1 Evaluate hazard and risks 4.2 Control hazards and risks 4.3 Maintain occupational health and safety awareness	• Discussion • Plant tour • Symposium	• Observation • Interview

COMMON COMPETENCIES

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Apply Food Safety and Sanitation	1.1 Wear personal protective equipment 1.2 Observe personal hygiene and good grooming 1.3 Implement food sanitation practices 1.4 Render safety measures and first aid procedures 1.5 Implement housekeeping activities	• Demonstration • Dual training • Individual Self-paced learning • Lecture	• Written examination • Demonstration of practical skills • Direct observation • Interview
2. Use Standard Measuring Devices/Instruments	2.1 Identify standard measuring devices and instruments 2.2 Review the procedures in using standard measuring devices and instruments 2.3 Follow procedures of using measuring devices and instruments	• Demonstration • Dual training • Individual Self-paced Learning • Lecture	• Written examination • Demonstration of practical skills • Direct observation • Interview
3. Use Food Processing Tools, Equipment and Utensils	3.1 Perform Pre-Operation Activities 3.2 Operate, monitor and maintain Food processing Equipment 3.3 Perform post operation activities	• Demonstration • Dual training • Individual Self-paced Learning • Lecture	• Written examination • Demonstration of practical skills • Direct observation • Interview

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
4. Perform Mathematical Computations	4.1 Gather, summarize and tabulate the recorded data 4.2 Review the various formulations 4.3 Calculate production input and output 4.4 Compute production cost	• Lecture • Practical exercise	• Written examination • Practical exercise • Direct Observation
5. Implement Good Manufacturing Practice	5.1 Perform pre-work activities in relation to GMP 5.2 Identify requirements of GMP related to own work 5.3 Observe personal hygiene and conduct to meet GMP requirements 5.4 Follow GMP requirements when carrying out work activities 5.5 Perform post-work activities in relation to GMP 5.6 Complete workplace documentation to support GMP	• Audio Visual • Lecture/ Discussion • Practical Lab • Demonstration • Individual Self-paced Learning	• Written/Oral examination • Demonstration of practical skills • Direct observation • Interview
6. Implement Environmental Policies and Procedures	6.1 Access and apply workplace information on environmental policies and procedures relating to own work 6.2 Follow work procedures 6.3 Identify, control and report unacceptable performance 6.4 Maintain housekeeping standards in work area	• Audio Visual • Lecture/ Discussion • Practical Lab • Demonstration • Individual Self-paced Learning	• Written/Oral examination • Demonstration of practical skills • Direct observation • Interview

CORE COMPETENCIES

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Package Processed Fish by Vacuum or Ordinary Poly Packing	1.1 Inspect Packaging Materials, Tools and Equipment 1.2 Perform Inner Packaging of Processed Fish Products 1.3 Perform Outer Packaging Procedures	Discussion Demonstration	• Actual Demonstration • Observation • Questioning
2. Package Processed Fish by Bottling	2.1. Inspect Packaging Materials, Tools and Equipment 2.2. Perform Bottling of Processed Fish 2.3. Perform Post Packaging Procedures	• Discussion • Demonstration	• Actual Demonstration • Observation • Questioning
3. Package Processed Fish by Canning	3.1. Inspect Packaging Materials, Tools and Equipment 3.2. Perform Canning of Processed Fish 3.3. Perform Post Packaging Procedures	• Discussion • Demonstration	• Actual Demonstration • Observation • Questioning

3.2 TRAINING DELIVERY

The delivery of training should adhere to the design of the curriculum. Delivery should be guided by the 10 basic principles of competency-based TVET.

- The training is based on curriculum developed from the competency standards;
- Learning is modular in its structure;
- Training delivery is individualized and self-paced;
- Training is based on work that must be performed;
- Training materials are directly related to the competency standards and the curriculum modules;
- Assessment is based in the collection of evidence of the performance of work to the industry required standard;
- Training is based both on and off-the-job components;
- Allows for recognition of prior learning (RPL) or current competencies;
- Training allows for multiple entry and exit; and
- Approved training programs are Nationally Accredited

The competency-based TVET system recognizes various types of delivery modes, both on and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities may be adopted when designing training programs:

- The dualized mode of training delivery is preferred and recommended. Thus programs would contain both in-school and in-industry training or fieldwork components. Details can be referred to the Dual Training System (DTS) Implementing Rules and Regulations.
- Modular/self-paced learning is a competency-based training modality wherein the trainee is allowed to progress at his own pace. The trainer just facilitates the training delivery.
- Peer teaching/mentoring is a training modality wherein fast learners are given the opportunity to assist the slow learners.
- Supervised industry training or on-the-job training is an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire specific competencies prescribed in the training regulations.
- Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, audio, video or computer technologies.

3.3 TRAINEE ENTRY REQUIREMENTS

Trainees or students should possess the following requirements:

- can communicate both orally and in writing;
- physically and mentally fit;
- with good moral character; and
- can perform basic mathematical computation.

This list does not include specific institutional requirements such as educational attainment, appropriate work experience, and others that may be required of the trainees by the school or training center delivering the TVET program.

3.4 LIST OF TOOLS, EQUIPMENT AND MATERIALS

FISH-PRODUCTS PACKAGING NC II

Recommended list of tools, equipment and materials for the training of 25 trainees for Fish-Products Packaging NC II are as follows:

TOOLS		EQUIPMENT		MATERIALS	
QTY	**Description**	**QTY**	**Description**	**QTY**	**Description**
5 units	• Weighing scales (10 kg. capacity)	1	• Refrigerator	**A. Food supplies**	
5 pcs	• Dial/Digital thermometers	1 unit	• Freezer	20 kgs.	• Processed fish products (milkfish, tilapia, shrimp)
20 pcs	• Utility trays	1 unit	• Stoves	1 gal	• Oil
10 pcs	• Food tongs	1 pc	• Strapping machine	1 kg	• Tomatoes (medium size)
15 pcs	• Knives	1 pc	• Heat sealer	1 kg	• Salt
5 pcs	• Measuring cups	1 pc	• Shrink wrapping machine	100 g	• Bay leaf
10 pcs	• Chopping boards	1 pc	• Tape/Adhesive dispenser	1 kg	• Pickles
5 pcs	• Measuring spoons	1 pc	• Cap sealer	500 g	• Peppercorn
2 pcs	• Clock/Timer	1 pc	• Pressure canner	500 g	• Cloves
15 pcs	• Mixing bowl	1 unit	• Pressure cooker	500 g	• MSG
		1 unit	• Plastic cap sealer	**B. Non food**	
		1 unit	• Vacuum pack machine	3 packs	• PE plastic packaging materials
		1 unit	• Labeling machines	3 boxes	• 12 oz., round bottles with screw caps

			TRAINING MATERIALS	2 packs	• Plastic cap seals
		1 pc	• Books/Reference	3 boxes	• Tin cans with lids
		1 pc	• Manual	1 gal	• Disinfectant
		1 pc	• Videos	1 kg	• Detergent
				1 pack	• Labels
				10	• Corrugated cartons
				10	• Inner cartons
				2 pcs	• Carton strap

3.5 TRAINING FACILITIES

The fish products packaging workshop must be of concrete structure. Based on a class size of 25 students/trainees the space requirements for the teaching/learning and circulation areas are as follows:

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
Building (permanent)			
Laboratory area	6 x10	60	60
Tool room & storage area	4 x 5	20	20
Learning resource area	5 x 6	30	30
Wash area/comfort room (male & female)	2.5 x 4	10	10
Total			120
Facilities/Equipment/ Circulation (30% of teaching accommodation)			40
Total workshop area			160

Note: Experimental area will change according to availability of land.

3.5 TRAINER'S QUALIFICATIONS FOR FISH PRODUCTS PACKAGING NC II

TRAINER QUALIFICATION (TQ II)

- Must be a holder of Fish Products Packaging NC II qualification or equivalent
- Must have undergone training on Training Methodology II(TM II) or equivalent in training/experience
- Must be computer literate
- Must be physically and mentally fit
- *Must have at least 2 years job/industry experience
- Must be a civil service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)

* Optional. Only when required by the hiring institution.

Reference: TESDA Board Resolution No. 2004-03

3.6 INSTITUTIONAL ASSESSMENT

Institutional Assessment is to be undertaken by the learner who enrolled in a structured learning program to determine the achievement of competencies. It is administered by the trainer/assessor at end of each learning module.

The result of the institutional assessment may be considered as an evidence for national assessment.

SECTION 4 NATIONAL ASSESSMENT AND CERTIFICATION ARRANGEMENTS

4.1 To attain the National Qualification of **FISH-PRODUCTS PACKAGING NC II,** the candidate must demonstrate competence in all the units listed in Section 1. Successful candidates shall be awarded a National Certificate signed by the TESDA Director General.

4.2 The qualification of Fish-Products Packaging NC II may be attained through accumulation of Certificates of Competency (COCs) in the following areas:

4.2.1 Package Processed Fish by Vacuum or Ordinary Poly Packing
4.2.2 Package Processed Fish by Bottling
4.2.3 Package Processed Fish by Canning

Successful candidates shall be awarded Certificates of Competency (COCs)

4.3 Accumulation and submission of all COCs acquired for the relevant units of competency comprising a qualification, an individual shall be issued the corresponding National Certificate

4.4 Assessment shall focus on the core units of competency. The basic and common units shall be integrated or assessed concurrently with the core units.

4.5 The following are qualified to apply for assessment and certification:

4.5.1 Graduates of formal, non formal and informal including enterprise-based training programs.

4.5.2. Experienced workers (wage employed or self-employed)

4.6 The guidelines on assessment and certification are discussed in detail in the Procedures manual on Assessment and Certification and Guidelines on the implementation of the Philippine TVET Qualification and Certification System (PTQCS).

COMPETENCY MAP FOR PROCESSED FOOD AND BEVERAGES SECTOR

CORE UNITS OF COMPETENCY

Package Processed Fish by Vacuum or Ordinary Poly Packing	Package Processed Fish by Bottling	Package Processed Fish by Canning	Follow work procedures to maintain Good Manufacturing Practice	Follow work procedures to maintain environmental standards
Work with temperature controlled stock	Skin, loin and flake fish	Operate a high speed wrapping process	Operate a packaging process	Operate a forklift
Inspect and sort materials and product	Implement Good Manufacturing Practice Procedures	Manually fill cans	Maintain the temperature of seafood	Clean and sanitize equipment
Prepare basic mixes	Dispense non bulk ingredients	Operate a can seaming process	Evaluate a batch of seafood	Clean equipment in place
Monitor process operation	Operate a mixing / blending process	Operate pumping equipment	Package product using manual packing and labeling equipment	Implement environmental policies and procedures
Operate basic equipment	Process Food by Salting, Curing and Smoking	Operate a retort process	Operate carton scales	Conduct routine maintenance
Measure and record workplace information	Process Food by Fermentation and Pickling	Operate a freezing process	Operate carton sealing machine	Work in a food handling area for non-food handlers
Assemble and prepare cartons	Process food by sugar concentration	Operate a water purification process	Operate scales and semi-automatic labeling machinery	Handle dangerous goods/ hazardous substances
Pack product manually	Package finished / processed food products	Pre-process raw materials	Operate strapping machine	Load and unload goods / cargo
Operate automated washing equipment	Work in a freezer storage area	Operate a steaming/cooking process		

CORE UNITS OF COMPETENCY

Use product knowledge to complete work operations	Use information technology devices and computer applications in the workplace	Implement sampling procedures	Participate in sensory analysis	Perform basic tests
Maintain food safety when loading, unloading and transporting food	Operate a boiler – basic	Operate a waste water treatment system	Apply principles of food packaging	Manage the implementation of environmental management policies
Apply raw materials / ingredients and process knowledge	Operate processes in packaging system	Set up a production / packaging line for operation	Control food contamination and spoilage	Manage the implementation of occupational health and safety policies and procedures in the workplace
Control and order stock	Participate in HACCP team	Solve problem using “quality tools”	Describe and analyze data using mathematical principles	Manage water treatment process
Implement the pest prevention program	Participate in an audit process	Use inventory system to organize stock control	Establish process capability	Optimize a work process
Monitor the implementation of environmental management policies	Participate in improvement process	Apply understanding of food additives	Manage a work area within budget	Participate in product recalls
Monitor the implementation of Good Manufacturing Practice Procedures	Receive and store stock	Apply understanding of legal requirements in food product	Manage and evaluate new product trials	Plan and coordinate maintenance
Operate processes in a production system	Report on workplace performance	Apply basic engineering principles to a food production process	Manage internal audits	Schedule and manage production

COMMON UNITS OF COMPETENCY

Apply Food Safety and Sanitation	Use Standard Measuring Devices / Instruments	Use Food Processing Tools, Equipment and Utensils	Perform Mathematical Computation
Implement good manufacturing practice procedures	Implement environmental policies and procedures		

BASIC UNITS OF COMPETENCY

Receive and Respond to Workplace Communication	Participate in Workplace Communication	Lead Workplace Communication	Utilize specialist communication	Develop Team and Individual
Work With Others	Work in a Team Environment	Lead Small Team	Solve Workplace Problems Related to Work Activities	Apply Problem Solving Techniques in the Workplace
Practice Career Professionalism	Practice Occupational Health and Safety	Practice housekeeping procedures	Demonstrate work values	Plan and Organize Work

Fish Products Packaging NC II

DEFINITION OF TERMS

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

- **Bottling/Canning** – refers to a preservation of foods in hermetically sealed containers such as tin cans and glass jars by sterilization with heat
- **Block –** shape, mold or form into a block
- **Cans** – are metal container made of steel base with a thin coating of tin on each side; igve hermetic seal and resistant to heat
- **Defect** – a condition found in a product which fails to meet essential quality, composition and/or labeling provisions of the appropriate product standards.
- **Dried** – preserved by removing natural moisture
- **Eviscerate –** is the removing of internal organs
- **Exhausting** – refers to the removal of air and gases from the raw material and the container before sealing; It refers to the heating of canned foods to a center can temperature of 180°C to 205°F before sealing.
- **Fresh** – Recently made, produced, or harvested; not stale or spoiled.
- **Freezing** - a method of food preservation by storing food at about 0° F
- **Frozen** – preserved by freezing
- **Fillet** – is a slice of fish of irregular size and shape removed from the carcass by cuts made parallel to the back bone.
- **Fish Processing** – refers to the application of heat in varying degree to the fish enclosed in a container for a sufficient time to sterilize the product
- **Food quality standards-** specify consumer and trade requirements as well as affects market acceptability and price
- **Food safety standards** – determine safety of food and human consumption
- **Glass** – rigid, inert and transparent but fragile and heavy.
- **Hazard Analysis and Critical Control Points (HACCP)** - is a systematic preventative approach to food safety that addresses physical, chemical and biological hazards as a means of prevention rather than finished product inspection.

- **Hermetic Sealing**- refers to the closure of food in tin cans or glass jars tightly to prevent the entrance of microorganisms and contamination of products.

- **Individually Quick Frozen** - frozen separately as single units

- **International Organization for Standardization** (**ISO**) - is an international standard-setting body composed of representatives from national standards bodies. Founded on 1947-02-23, the organization produces world-wide industrial and commercial standards, the so-called ISO standards.

- **Packaging** – the enclosure of products, items or packages in a wrapped pouch, bag, box, cup, tray, can tube, bottle or other container to perform the following functions: containment, protection and/or preservation, communication and utility or performance

- **Polyethylene** - a lightweight thermoplastic, used especially in packaging and insulation

- **Raw Materials** – consist of the main food material to be processed including minor food ingredients

- **Sanitation** - refers to the process of treating food contact and non-food contact surface with physical agents and chemicals to kill the residual microorganisms present after cleaning

- **Smoked** – cured by the process of flavoring, cooking, or preserving food by exposing it to the smoke from burning or smoldering plant materials, most often wood

- **Sanitation Standard Operating Procedures** is the common name give to the sanitation procedures in food production plants which are required by the Food Safety and Inspection Service of the USDA. It is considered one of the prerequisite programs of HACCP

- **Thermal Processing** – refers to the method of processing food in hermetically sealed container by applying heat with the right temperature and time, enough to kill microorganisms responsible in the spoilage of food which involve bottling and canning

- **Vacuum –** a state of pressure reduction below atmosphere.

- **Vacuum packed product –** product that is sealed in a container under the vacuum specified in the scheduled process, the maintenance of which vacuum is critical to the adequacy of scheduled process.

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