

NATIONAL COUNCIL FOR TECHNICAL EDUCATION



NOVEMBER 2022

PROPOSED OCCUPATIONAL STANDARDS

OCCUPATION: FOOD TECHNICIAN

LEVEL: NTA 4

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FOREWORD

The National Council for Technical Education (NACTE) is a corporate body established by the National Council for Technical Education Act, Cap.129. The Act provides a legal framework for the Council to coordinate the provision of technical education and training in Tanzania. The mandate of NACTE is three-fold, namely: Regulatory, Quality Assurance and Policy Advisory. In discharging its mandate, the Council has been charged with the responsibilities, among others, to:

- (a) assist technical institutions in the transmission of knowledge, principles and training in the field of technical education and training for the benefit of the people of Tanzania;
- (b) assist technical institutions in the overall development of the quality of education they provide and to promote and to maintain approved academic standards;
- (c) establish and make awards in technical education which are consistent in standard and comparable to related awards in Tanzania and internationally; and
- (d) ensure that the quality of education required for the awards is met and maintained throughout the duration of the delivery of the course.

In the course of execution of these responsibilities, the Council has been instituting various measures aiming at advancing the quality of training provided in technical institutions in respect of the changing demands of the labour market, both local and international.

To achieve the above obligation, NACTE, under the Ministry of Education, Science and Technology implemented the East Africa skills for Transformation and Regional Integration Project (EASTRIP), a project aiming at promoting regional integration through supporting the regional corridors and sector markets, developing common standards and qualifications, and promoting mobility of students, faculty, and graduates. The project supports the Government of Tanzania to address shortage of skills in five sectors namely:

- (a) Energy;
- (b) Construction;
- (c) Information and Communication Technology (ICT);
- (d) Transportation; and
- (e) Agribusiness.

To address the skills, miss-match and shortage in the five (5) sectors in the country, the project funded, among others, a component of Development of Occupational Standards for Technical and Vocational Education and Training (TVET). In this regard, NACTE endeavoured to identify qualified and highly experienced experts in the five sectors from both the industry and training institutions to carry out the development of Occupational Standards. The exercise was carried out at Morogoro Teachers College – Morogoro from 27th August to 24th September, 2021. The output of the exercise is Occupational Standards for 14 occupations. Occupational standards for Renewable Energy are among the occupational standards for 14 occupations which have been developed.

Since Occupational Standards are statements of work performance reflecting the ability to successfully complete the functions required in an occupation, as well as the application of knowledge, skills, attitudes and understanding in an occupation, it is the Council's expectations that the developed standards will form a robust base for decision making and provide explicit guidance to policy makers, curriculum developers, educators, employers and other stakeholders in matters related to manpower planning as well as execution of Technical and Vocational Education and Training undertakings.

Prof. J. W. Kondoro
Chairman

Dar es Salaam
NOVEMBER, 2022

ACKNOWLEDGEMENT

The National Council for Technical Education (NACTE) is charged with the mandate to be the Quality Assurance organ of the Government in matters related to Technical and Vocational Education and Training (TVET) and production of qualified manpower for both local and international labour markets. In order to realize this obligation, NACTE endeavours to institute policies, guidelines and standards and to set the quality benchmarks for training institutions.

However, this is only possible if there is a strong base, linking the training institutions on one hand and the demands of the industry/labour market for relevant manpower on the other hand. Therefore, the Council undertook a step to develop Occupational Standards in sectors considered to be the engine to steer the country's desire to achieve an industrial economy. This exercise would not be a success without the input and support from our stakeholders. I am indebted to acknowledge some of them here.

I wish to acknowledge and appreciate the support from the Ministry of Education, Science and Technology through the East Africa skills for Transformation and Regional Integration Project (EASTRIP) for the financial support which facilitated the preparation of this document. I wish also to appreciate Mrs Leah Lukindo and Eng. Dr. Simon Baregu for the tireless efforts and commitment in facilitating and guiding the standards development process, Ms. Eileen Tzamburakis and Ms. Chausiku Yakweli Ibrahim for compiling and type setting the final document; and the NACTE Secretariat for coordinating the whole activity.

In a very special way I wish further to extend my sincere gratitude to this team of wonderful experts who tirelessly dedicated their time and availed their invaluable intellect in the preparation of this document. I would like to recognise the colossal inputs of the following experts:

S/N	Name	Designation	Occupation	Organization
1	Ms. Sophia Daud Magau	System Coordinator	Food Processing Technologists	Nyanza Bottling Company Limited
2	Mr. Iddy Rashid Mkolamasa	Plant Manager	Food Processing Technologists	CPB

In addition, NACTE hopes to further enhance the internationalization of occupational standards and promote the modernization and internationalization of industries, facilitating Tanzania's integration into the international market and exploiting its development potential. Therefore, NACTE has invited China-Africa Vocational Education Alliance and China-Africa (Chongqing) Vocational Education Alliance to participate in the development, revision and review of occupational standards documents in collaboration with Chinese vocational institutions, so as to make use of their rich experience in vocational education efforts and rely on China's advanced and complete industrial chain and its position in the international market to contribute to the development of vocational education and related industries in Tanzania.

Therefore, I would like to express my sincere gratitude to this specialized team of Chinese institutions and experts. I thank them for their hard work and dedication, and for contributing their wisdom and experience to the preparation of this document. I would like to thank the following institutions and experts for their support:

S/N	Organization	Name	Title/Professional Field
1	Chongqing Chemical Industry Vocational College	Zhang Jing	Associate Professor/Food Science
2		Huang Yue	None / Food Biotechnology
3		Yi Sha	Lecturer/ Food Safety and Toxicology
4		Dai Yan	Lecturer/ Agricultural products processing and storage engineering
5		Jiang Wenming	Assistant Researcher/Food Biotechnology
6		Chen Hongmin	Lecturer /Environmental Engineering
7	Dongying Vocational Institute	Nie Xuekui	Lecture/Management

8		Zhang Bin	Lecturer/Food Science and Engineering
9		Zhao Qike	Assistant Tutor/ Food Science and Engineering
10		Zhao Chun	Associate Professor/Chinese Herbal Medicine
11	Shanghai Information Technology College	Ye Sumei	Associate Professor/ Biochemistry and Molecular Biology
12		Wang Wenhua	Lecturer/Food Science

Dr. A. B. Rutayuga
Executive Secretary

Dar es Salaam
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ABBREVIATIONS

CCPs	Critical Controlling Points
FEFO	First Expiry First Out
FIFO	First in First Out
GHP	Good Hygiene Practices
GLP	Good Laboratory Practices
GMP	Good Manufacturing Practices
HACCP	Hazard Analysis and Critical Control Points
ISO	International Standardization Organization
NACTE	National Accreditation Council of Technical Education
NOS	National Occupational Standards
OPRPs	Operational Prerequisite Programs
OS	Occupational Standards
PRPs	Prerequisite Programs
TACCP	Threat Assessment and Critical Control Point
TET	Technical Education and Training
TVET	Technical and Vocational Education and Training
VACCP	Vulnerability Assessment and Critical Control Point

GLOSSARY OF TERMS

Circumstantial Knowledge:	Detailed knowledge, which allows the decision-making in regard to different circumstances and cross cutting issues.
Competence:	The ability to use knowledge, understanding, practical and thinking skills to perform effectively to the workplace standards required in employment.
Competency:	A description of the ability one possesses when able to perform a given occupational task effectively and efficiently.
Competency-Based Education:	An instructional program that derives its content from validated tasks and bases assessment on the learner's performance.
Curriculum:	A description or composite of statements about “what is to be learned” by the trainee/student in a particular instructional program; a product that states the “intended learning outcomes”.
Educational/Training Programme:	The complete curriculum and instruction (what and how) that is designed to prepare a person for employment in a job or other particular performance situation.
Occupation:	A specific position requires the performance of specific tasks – essentially the same tasks are performed by all employees having the same title. (Example: baker)
Occupational Analysis:	A process used to identify the tasks that are important to employees in any given occupation.
Occupational Area:	This is a broad grouping of related jobs. Example: food service.
Occupational Competence:	The application of knowledge and skills to perform consistently to the standards required in the work context.

Occupational Standards:	Specific requirements of competences people are expected to demonstrate in a particular occupational area, including knowledge and relevant attitudes. They also act as performance tool of assessment of the pre – scribed outcomes.
Performance Criteria:	Indicate the expected end results or outcome in form of evaluative statements.
Skills:	The ability to perform occupational tasks with a high degree of proficiency within a given occupation. Skill is conceived of as a composite of three completely interdependent components: cognitive, affective, and psychomotor.
Standards:	It is a set of statement, which if proved true under working conditions, means that an individual is meeting an expected level and type of performance.
Task:	A work activity that has a definite beginning and ending, is observable or measurable, consists of two or more definite steps, and leads to a product, service, or decision.
Task Analysis:	The process of analysing each task to determine the steps, related knowledge, attitudes, performance standards, tools and materials needed, and safety concerns required of employees performing it.
Underpinning Knowledge:	This is crucial knowledge that an individual must acquire in order to demonstrate competences that are associated in performing a given task.
Verification Process:	The process of having experts review and conform the importance of the task (competency) statements identified through occupational analysis. Other questions, such as the degree of task learning difficulty are also frequently asked. This process is also sometimes referred to as validation.

1.0. INTRODUCTION

Technical Education and Training (TET) is one of the most important education sub-sectors in Tanzania, responsible for developing a skilled workforce to support the country's industrialization economic agenda. Tanzania's Development Vision 2025 intends to raise the country's economy to a middle-income status. This requires a skilled workforce that is aligned with the needs of the public and private sectors of the economy. The National Council for Technical Education has begun the job of drafting Occupational Standards that will eventually be adopted as National Occupational Standards for TET in order to ensure that it meets the needs of the labour market and the country's economic agenda.

National Occupational Standards (NOS) are performance criteria that are matched with labour market demands. Each National Occupation Standard describes functions, performance standards, and knowledge/understanding for one important function or task. They combine skills, knowledge, and attitudes to describe best practice. They are useful tools for establishing job roles, personnel recruiting, supervision, and appraisal, as well as TET standards. They're also helpful for benchmarking and harmonizing qualifications on a national and international level. Standards, in general, provide a solid framework for high-quality TET that is labour market-relevant, current and consistent in delivery across all public and private institutions.

However, it must be noted that, Occupational Standards and Training standards/qualifications standards are different. Occupational standards are defined in terms of activities performed by a person in a selected occupation (e.g., an electrical engineer designs electrical wiring circuits, performs trouble shooting in electrical wiring, etc.) and they are usually defined by employers following procedures agreed upon by all stakeholders. Education and training standards are developed from the activities defined in occupational standards, and they include learning objectives to ensure that the necessary skills and knowledge are developed by a person to enable him or her to function at an agreed level in an occupation. Education and Training standards are used to define curricula in training institutions. It is however critical that there must be a direct link between the occupational standards and the training standards to respond to demands of the labour market.

In TET delivery, Tanzania adopted the Competency-based Education and Training (CBET) approach. The CBET approach focuses on providing learners with the skills and knowledge required to meet the occupational standards. Occupational standards are thus the starting point for developing Competency-based Education and Training (CBET) programs. TET institutions will be required to benchmark their curricula with relevant occupational standards.

Occupational Standards are developed based on a given occupation's current and future demands. As a result, they serve as a means of bridging the gap between the worlds of employment and technical education and training (TET).

The Food Technician Occupation has its own set of occupational standards. The document explains how the occupational standards were developed, as well as the scope, the occupational profile in the form of DACUM charts, and the Occupational Standards.

2.0. OCCUPATIONAL STANDARD DEVELOPMENT PROCESS

The Occupational standards development process began with an examination of major documents that guide Tanzanian skill development. The 10-year National skills Development Strategy (2016-2026) was one of the documents reviewed, and it outlined six (6) economic sectors that should be prioritized when developing skills development programmes. These sectors include: Transport and logistics, Tourism and Hospitality, Agribusiness, Construction, Energy and ICT. NACTE labour market reports were also used in the literature review to determine the skills demand in the Tanzanian labour market as a whole.

After the literature review, a workshop comprised of expert workers and educators with substantial knowledge and experience in the occupation conducted an occupational analysis utilizing the DACUM approach to produce the occupational profile. The analysis resulted in DACUM Charts, which are attached as **Appendix 1** to this document.

The workshop thereafter continued with the development of occupational standards. Experts in Occupational Analysis and Occupational Standards Development facilitated the workshop. Interviews, online surveys, and a stakeholder forum were used to validate the occupational standards. Engineers, supervisory technicians on the job, and experienced Civil Engineering

technicians were key informants in the survey to discover occupational trends. This information was used to gain insight from the workplaces regarding trends and changes in the profession, including how well graduates are prepared for working in the occupation. A total of online surveys were completed by experts from the labour market across the country. Apart from the survey aiding in defining the scope for the occupational analysis, they served to engage a wide cross-section of experts in the occupation. The stakeholders' forum was attended by participants from different parts of the country representing various companies.

3.0. THE SCOPE AND OVERVIEW OF THE OCCUPATION STANDARDS FOR FOOD TECHNICIAN

The Food Technician plays an important role in areas like food industries, food laboratories in ensuring quality and safety of the food product as per governing standards and procedures to attain compliance. Food technicians assist food scientists/technologists in testing the safety and quality of food products and conducting research that can lead to improvements in the food industry. Depending on the kind of lab they work in, they may conduct analytical experiments that detect harmful food products before they are released to the general public, aid in food formulations development or increase food manufacturing efficiency. The standard covers the following main duties of Food Technician:

- a) Inspect the incoming raw materials for food manufacturing
- b) Perform warehouse management
- c) Conduct cleaning and sanitation program of food processing equipment
- d) Monitor food packaging quality test
- e) Maintain food laboratory inventory and layout
- f) Monitor routine maintenance for food contact equipment
- g) Monitor pest control program in food facility
- h) Monitor personal hygiene practices in food facility
- i) Monitor housekeeping program in food facility
- j) Monitor corrective action program of the non-conformities
- k) Monitor food product stability
- l) Coordinate food safety program in food facility

- m) Monitor health and safety program (H&S) in food facility
- n) Participate in research to improve food processing methods and food composition
- o) Monitor food raw materials and finished product in food facility

4.0. VALIDITY PERIOD

The occupational standards will be valid for 3-5 years due to the fast-changing nature of technology. The review will proceed in the same manner as the previous one, with new occupational standards being developed based on current labour market information.

5.0. OCCUPATIONAL STANDARDS

5.1 OCCUPATIONAL STANDARDS FOR FOOD TECHNICIAN – NTA 4

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	INSPECT THE INCOMING RAW MATERIALS FOR FOOD MANUFACTURING	DUTY NO.	401
TASK TITLE	DETERMINE THE COMPLIANCE OF FOOD RAW MATERIALS TO APPROVED SPECIFICATIONS	TASK NO.	4011
PERFORMANCE CRITERIA	The person performing this task must be able to establish compliance of food raw materials to approved food manufacturing standards as per approved inspection procedures.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operating procedures document, manuals, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
The person performing this task must be able to perform the following 1. Obtain the right tools and materials for the task; 2. Verify Production License; 3. Verify Certificate of analysis; 4. Verify Certificate of conformance; 5. Verify suppliers' name, address and contact details; 6. Verify batch number and date of manufacture; 7. Verify expire date; 8. Verify test results; 9. Maintain verification records; 10. Keep relevant documents; 11. Observe relevant health and safety precautions when performing the task; 12. Clean work area; 13. Store documents used appropriately.	Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Verify suppliers' details; 1.2. Verify traceability information; 1.3. Document verification record. 2.0. Principle The person must be able to explain the principles of: 2.1. Inspection; 2.2. First Expiry First Out (FEFO) and First In First Out (FIFO); 2.3. Good manufacturing Practices (GMP). 3.0. Theories The person must be able to explain: 3.1. Inspection procedures; 3.2. Document management; 3.3. Label identification. 4.0. Essential skills 4.1. Computer skills; 4.2. Communication skills; 4.3. Problem solving skills; 4.4. Integrity; 4.5. Time management;		

	4.6. Quick to learn; 4.7. Flexibility; 4.8. Critical thinking; 4.9. Adherence to laws and regulations.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Compliance of raw materials to food manufacturing standards is established as per approved inspection procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Documents handlings; 2. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	INSPECT THE INCOMING RAW MATERIALS FOR FOOD MANUFACTURING	DUTY NO.	401
TASK TITLE	DETERMINE THE CONDITION OF FOOD RAW MATERIALS	TASK NO.	4012
PERFORMANCE CRITERIA	The person performing this task must be able to establish food raw materials condition as per standards governing food manufacturing.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a Senior Food technician. The following tools and materials will be needed in performing the task: standard operating procedures document, manuals, Personal Protective Equipment PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to perform the following 1. Obtain right tools and materials for the task; 2. Verify tamper evidence on seal of the raw materials; 3. Verify raw materials' appearance; 4. Verify name, specification and physical quantity of the raw materials; 5. Maintain inspection records; 6. Observe relevant health and safety precautions when performing the task; 7. Clean work area; 8. Store records appropriately for easy retrieval.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Inspect raw materials; 1.2. Document inspection record. 2.0. Principles The person must be able to explain the principles of: 2.1. Inspection; 2.2. FEFO and FIFO; 2.3. Good Manufacturing practices (GMP). 3.0. Theories The person must be able to explain: 3.1. Inspection Guidelines; 3.2. Food Materials properties; 3.3. Raw material quality requirements. 4.0. Essential skills 4.1. Practical skills; 4.2. Computer skills; 4.3. Communication skills; 4.4. Sensitivity and judgment ability; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Critical thinking; 4.8. Time management.	

DESCRIPTION OF THE END PRODUCTS / SERVICE	The condition of raw materials is established as per standards governing food manufacturing.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Materials handling; 2. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	INSPECT THE INCOMING RAW MATERIALS FOR FOOD MANUFACTURING	DUTY NO.	401
TASK TITLE	EVALUATE CONDITIONS OF FOOD VEHICLE	TASK NO.	4013
PERFORMANCE CRITERIA	The person performing this task must be able to evaluate the condition of the food vehicle as per approved standard procedures.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: Testing tools, Standard operating procedures document, manuals, Equipment, Personal Protective Equipment (PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to perform the following 1. Obtain right tools and materials for the task; 2. Verify driver details; 3. Verify vehicle details; 4. Inspect vehicle cleanness; 5. Verify tamper evidence on vehicle seals; 6. Inspect vehicle temperature condition; 7. Inspect vehicle humidity condition; 8. Inspect whether toxic or hazardous substances are transported; 9. Inspect whether there is cross contamination; 10. Document vehicle inspection records; 11. Observe relevant health and safety precautions when performing the task; 12. Store tools, equipment and records appropriately; 13. Clean work area and tools.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Inspect vehicle details; 1.2. Inspect vehicle condition; 1.3. Maintain inspection record. 2.0. Principle The person must be able to explain the principles of: 2.1. Inspection; 2.2. FEFO and FIFO; 2.3. Good Manufacturing Practices (GMP). 3.0. Theories The person must be able to explain: 3.1. Food Inspection Guidelines; 3.2. Materials properties; 3.3. Cross contamination. 4.0. Essential skills 4.1. Practical skills; 4.2. Time management; 4.3. Computer skills; 4.4. Communication skills; 4.5. Problem solving skills; 4.6. Integrity.	

DESCRIPTION OF THE END PRODUCTS / SERVICE	Food vehicles condition is evaluated as per approved standard procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health.

OCCUPATION	BASIC FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	INSPECT THE INCOMING RAW MATERIALS FOR FOOD MANUFACTURING	DUTY NO.	401
TASK TITLE	CONDUCT QUALITY TEST OF THE RAW MATERIALS	TASK NO.	4014
PERFORMANCE CRITERIA	The person performing this task must be able to perform quality tests of raw materials as per standards governing food manufacturing and processing.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: Testing tools, standard operating procedures document, manuals, Equipment, Personal Protective Equipment (PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
The person performing this task must be able to do the following 1. Obtain right tools, equipment and materials for the task; 2. Take samples; 3. Perform sensory evaluation; 4. Perform physicochemical test analysis; 5. Perform microbiological test; 6. Verify packaging appearance; 7. Verify marking & labelling information; 8. Keep raw material test samples; 9. Document quality tests records; 10. Observe relevant health and safety precautions when performing the task; 11. Store tools, equipment and records appropriately; 12. Clean work area, tools and equipment.	Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Handle Laboratory equipment; 1.2. Perform Quality test of raw materials; 1.3. Document quality test record. 2.0. Principle The person must be able to explain the following principles: 2.1. Quality Management; 2.2. Good Laboratory Practices (GLP); 2.3. FEFO and FIFO; 2.4. Good Manufacturing Practices (GMP). 3.0. Theories The person must be able to explain: 3.1. Testing methods of raw materials; 3.2. Testing equipment operations; 3.3. Reagent’s handlings; 3.4. Data processing and analysis; 3.5. Sampling method. 4.0. Essential skills 4.1. Practical skills; 4.2. Reasoning and logic; 4.3. Computer skills;		

	4.4. Communication skills; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills; 4.8. Time management; 4.9. Working under pressure with minimum supervision.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Quality tests for incoming raw materials is performed as per approved standards governing food manufacturing and processing.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health; 2. Document processing.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	PERFORM WAREHOUSE MANAGEMENT	DUTY NO.	402
TASK TITLE	PERFORM INBOUND OPERATION	TASK NO.	4021
PERFORMANCE CRITERIA	The person performing this task must master the inbound procedures for food and food-related products to ensure food and food-related products conform to food production and processing standards.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operation procedures document, manuals, Equipment, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Prepare right tools, equipment and materials for the task; 2. Direct loaders in unloading, handling and stacking; 3. Handle inbound procedures and keep relevant documents; 4. Fill in electronic or paper-based information files of inbound articles; 5. Observe relevant health and safety precautions when performing the task; 6. Clean work area, tools and equipment.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1 Conduct inbound operations for food and food-related products; 1.2 Fill in forms and establish ledgers accurately. 2.0. Principle The person must be able to explain the following principles: 2.1. Good Hygiene Practices (GHP); 2.2. FEFO and FIFO; 2.3. Good Manufacturing Practices (GMP); 2.4. Document management. 3.0. Theories The person must be able to explain: 3.1. Warehouse management and technical knowledge; 3.2. Inbound procedures for food and food-related products; 3.3. Use and maintenance of common storage tools and	

	facilities; 3.4. Pictorial markings for article packaging, storage and transportation; 3.5. Warehouse safety knowledge. 4.0. Essential skills 4.1. Practical skills; 4.2. Reasoning and logic; 4.3. Computer skills; 4.4. Communication skills; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills; 4.8. Management skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Inbound operations are performed as per approved standard procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	PERFORM WAREHOUSE MANAGEMENT	DUTY NO.	402
TASK TITLE	PERFORM INVENTORY MANAGEMENT	TASK NO.	4022
PERFORMANCE CRITERIA	The person performing this task must master the inventory management methods and requirements for food and food-related products to ensure food and food-related products conform to food production and processing standards.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operation procedures document, manuals, Equipment, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Determine the article storage location according to the storage task and specific conditions; 2. Perform classified, partitioned, and special-storeroom-for-special-purpose management in warehouses; 3. Perform and record pest control; 4. Perform and record temperature and humidity control in warehouses; 5. Regularly organize the stocktaking of articles in stock; 6. Keep records of personnel entering and exiting warehouses; 7. Observe relevant health and safety precautions when performing		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Select storage facilities; 1.2. Perform classified and partitioned management of stock articles; 1.3. Perform pest control; 1.4. Adjust warehouse temperature and humidity; 1.5. Conduct stocktaking and account checking periodically. 2.0. Principle The person must be able to explain the following principles: 2.1. Good Hygiene Practices (GHP); 2.2. FEFO and FIFO; 2.3. Good Manufacturing Practices (GMP); 2.4. Document management.	

the task; 8. Clean work area, tools and equipment and keep cleaning records properly.	3.0. Theories The person must be able to explain: 3.1. Inventory management guideline; 3.2. Use and maintenance of storage tools and facilities; 3.3. Pictorial markings for article packaging, storage and transportation; 3.4. Warehouse safety knowledge. 4.0. Essential skills 4.1. Practical skills; 4.2. Reasoning and logic; 4.3. Computer skills; 4.4. Communication skills; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills; 4.8. Management skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Inventory management is performed as per approved standard procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	PERFORM WAREHOUSE MANAGEMENT	DUTY NO.	402
TASK TITLE	PERFORM OUTBOUND OPERATION	TASK NO.	4023
PERFORMANCE CRITERIA	The person performing this task must master the outbound procedures for food and food-related products to ensure food and food-related products conform to food production and processing standards.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operation procedures document, manuals, Equipment, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Prepare right tools, equipment and materials for the task; 2. Check the outbound documents; 3. Pick and prepare goods according to the outbound documents; 4. Record the carrier vehicle number and the valid documentation of the carrier; 5. Direct loaders in loading/unloading operations according to relevant specifications; 6. Handle outbound procedures and keep relevant documents; 7. Observe relevant health and safety precautions when performing the task; 8. Clean work area, tools and equipment.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1 Conduct outbound operations for food and food-related products; 1.2 Fill in forms, keep accounts, take stock and check accounts accurately. 2.0. Principle The person must be able to explain the following principles: 2.1. Good Hygiene Practices (GHP); 2.2. FEFO and FIFO; 2.3. Good Manufacturing Practices (GMP); 2.4. Document management. 3.0. Theories The person must be able to explain: 3.1. Outbound procedures for food and food-related products;	

	3.2. Use and maintenance of common storage tools and facilities; 3.3. Pictorial markings for article packaging, storage and transportation; 3.4. Warehouse safety knowledge. 4.0. Essential skills 4.1. Practical skills; 4.2. Reasoning and logic; 4.3. Computer skills; 4.4. Communication skills; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills; 4.8. Management skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Outbound operations are performed as per approved standard procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	CONDUCT CLEANING AND SANITATION PROGRAM OF FOOD PROCESSING EQUIPMENT	DUTY NO.	403
TASK TITLE	ESTABLISH CLEANING METHODS OF FOOD PROCESSING EQUIPMENT	TASK NO.	4031
PERFORMANCE CRITERIA	The person performing this task must be able to establish cleaning methods of food processing equipment to ensure food hygiene as per standards governing food manufacturing and processing.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operation procedures document, manuals, Equipment, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
The person performing this task must be able to do the following 1. Obtain right tools and materials for the task; 2. Identify the food processing cleaning equipment; 3. Verify food processing equipment manual; 4. Prepare food processing equipment cleaning schedule; 5. Read food processing equipment cleaning working instructions; 6. Document food processing cleaning methods; 7. Understand the wastewater storage and disposal methods; 8. Store tools, remaining materials and records appropriately; 9. Clean tools and work area.	Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1 Prepare food processing cleaning schedule; 1.2 Prepare food processing cleaning procedures; 1.3 Document food processing equipment cleaning methods. 2.0. Principles The person must be able to explain the principles of: 2.1. Good Hygiene Practices (GHP); 2.2. FEFO and FIFO; 2.3. Good Manufacturing Practices (GMP); 2.4. Document management. 3.0. Theories The person must be able to explain: 3.1. Chemicals Storage and Handling; 3.2. Equipment operations; 3.3. Cleaning reagent preparations; 3.4. Selection and wastewater treatment of cleaning water. 4.0. Essential skills 4.1. Practical skills; 4.2. Reading and logical reasoning abilities; 4.3. Computer skills; 4.4. Language competence and communication skills; 4.5. Problem solving skills; 4.6. Integrity;		

	4.7. Writing skills; 4.8. Ego drive and anti-stress ability; 4.9. Adherence to laws and regulations.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Food processing equipment cleaning methods are established as per food hygiene and sanitation standards.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health; 2. Food safety; 3. Environmental protection.

OCCUPATION	FOOD TECHNICIAN	OCCUPATIO N CODE	400
DUTY TITLE	CONDUCT CLEANING AND SANITATION PROGRAM OF FOOD PROCESSING EQUIPMENT	DUTY NO.	403
TASK TITLE	PREPARE CLEANING REAGENTS AND TOOLS FOR FOOD PROCESSING EQUIPMENT	TASK NO.	4032
PERFORMANCE CRITERIA	The person performing this task must be able to prepare reagents and tools required to clean and sanitize food processing equipment as per approved standards.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician The following tools and materials will be needed in performing the task: Standard operating procedures document, manuals, files, equipment, Personal Protective Equipment (PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Identify cleaning reagents and tools needed for food processing equipment; 2. Verify approved detergents and tools to be used for cleaning food processing equipment; 3. Verify availability of materials safety data sheets (MSDS) for food processing equipment; 4. Verify the correct concentration of detergents and disinfection solution used to clean food processing equipment; 5. Document cleaning reagents and tools inventory record to clean food processing equipment; 6. Inspect the storage and use methods of PPE; 7. Inspect cleaning water and wastewater discharge facilities; 8. Store tools, equipment and cleaning materials appropriately; 9. Clean tools and work place.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Prepare cleaning reagents and tools need to clean food processing equipment; 1.2. Handle cleaning reagents and tools needed to clean food processing equipment; 1.3. Inspect cleaning reagents and tools needed to clean food processing equipment; 1.4. Prepare inventory for cleaning reagents and tools needed to clean food processing equipment; 1.5. Select cleaning water and wastewater discharge. 2.0. Principles The person must be able to explain the principles of: 2.1. Good laboratory Practices (GLP); 2.2. Good Hygiene Practices (GHP); 2.3. FEFO and FIFO; 2.4. Good Manufacturing Practices (GMP); 2.5. Document management. 3.0. Theories The person must be able to explain: 3.1. Chemicals Handling; 3.2. Equipment operations; 3.3. Reagent preparations;	

	3.4. Inspection Guidelines; 3.5. Use of PPE. 4.0. Essential skills 4.1. Practical skills; 4.2. Reading and logical reasoning abilities; 4.3. Computer skills; 4.4. Language competence and communication skills; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills; 4.8. Ego drive and anti-stress ability; 4.9. Adherence to laws and regulations.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Cleaning reagents and tools required to perform cleaning process are prepared as per approved standards.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Documents Handling; 2. Occupational safety and health; 3. Food safety; 4. Environmental protection.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	CONDUCT CLEANING AND SANITATION PROGRAM OF FOOD PROCESSING EQUIPMENT	DUTY NO.	403
TASK TITLE	PERFORM CLEANING OF THE FOOD PROCESSING EQUIPMENT	TASK NO.	4033
PERFORMANCE CRITERIA	The person performing this task must be able to perform cleaning of food processing equipment as per approved standards governing food manufacturing and processing.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operation procedures document, manuals, files, equipment, Personal Protective Equipment (PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Select right tool, equipment and materials for the task; 2. Verify food processing cleaning steps matrix to be followed; 3. Inspect cleaning and sanitizing activities to make sure they do not contaminate the raw food materials and finished food products; 4. Inspect correct usage of PPEs during cleaning process; 5. Clean food equipment as per correct steps; 6. Treat wastewater correctly; 7. Document cleaning records of food processing equipment; 8. Observe relevant health and safety precautions when performing the task; 9. Clean tools, equipment and work area; 10. Store tool, equipment and the remaining cleaning materials appropriately.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Inspect food processing equipment cleaning activities; 1.2. Conduct cleaning out of place (COP); 1.3. Conduct Cleaning in place (CIP); 1.4. Verify cleaning process; 1.5. Document cleaning process of food processing equipment. 2.0. Principles The person must be able to explain the principles of: 2.1. Good Hygiene Practices (GHP); 2.2. FEFO and FIFO; 2.3. Good Manufacturing Practices; 2.4. Document management. 3.0. Theories The person must be able to explain: 3.1. Usage of disinfectants and detergent; 3.2. Equipment operations; 3.3. Reagent preparations; 3.4. Wastewater storage and treatment; 3.5. Importance of cleaning food premises. 4.0. Essential skills	

	4.1. Practical skills; 4.2. Reading and logical reasoning abilities; 4.3. Computer skills; 4.4. Language competence and communication skills; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills; 4.8. Ego drive and anti-stress ability; 4.9. Adherence to laws and regulations.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Cleaning of food processing equipment is performed as per standards governing food manufacturing and processing.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Documents Handling; 2. Occupational safety and health; 3. Food safety; 4. Environmental protection.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	CONDUCT CLEANING AND SANITATION PROGRAM OF FOOD PROCESSING EQUIPMENT	DUTY NO.	403
TASK TITLE	VERIFY EFFECTIVENESS OF FOOD PROCESSING EQUIPMENT CLEANING PROGRAMME	TASK NO.	4034
PERFORMANCE CRITERIA	The person performing this task must be able to verify effectiveness of food processing equipment cleaning program as per standards governing food manufacturing and processing.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing task: standard operation procedures documents, manuals, files, equipment, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Obtain right tools and materials for the task; 2. Conduct visual inspection of equipment cleaning; 3. Conduct microbiological testing on equipment contact surface; 4. Conduct chemical testing on equipment contact surface; 5. Inspect cleaning effectiveness; 6. Issue cleaning test report; 7. Document cleaning verification records; 8. Observe relevant health and safety precautions when performing the task; 9. Clean tools and work area; 10. Store tools, materials and records appropriately.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to 1.1. Perform food microbiological tests; 1.2. Communicate cleaning test records; 1.3. Inspect cleaning process; 1.4. Document cleaning monitoring records; 1.5. Contents of cleaning test report. 2.0. Principles The person must be able to explain the principles of: 2.1. Good Laboratory practices (GLP); 2.2. Good Hygiene Practices (GHP); 2.3. FEFO and FIFO; 2.4. Good Manufacturing practices (GMP); 2.5. Document management. 3.0. Theories The person must be able to explain: 3.1. Chemicals Handling; 3.2. Food contamination; 3.3. Method of microbiological examination on food contact surface; 3.4. Fill in and submit the cleaning test report. 4.0. Essential skills	

	4.1. Practical skills; 4.2. Reading and logical reasoning abilities; 4.3. Computer skills; 4.4. Language competence and communication skills; 4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills; 4.8. Ego drive and anti-stress ability; 4.9. Adherence to laws and regulations.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Effectiveness of cleaning program is verified to prevent food contamination as per standards governing the food industry.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Documents Handling; 2. Occupational safety and health; 3. Food safety.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	MONITOR FOOD PACKAGING QUALITY TEST	DUTY NO.	404
TASK TITLE	PERFORM FOOD PACKAGING QUALITY TEST	TASK NO.	4041
PERFORMANCE CRITERIA	The person performing this task must be able to perform food packaging quality test as per approved standard procedures.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operation procedures document, manuals, files, equipment, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Obtain relevant tools and materials necessary for the task; 2. Appearance index test; 3. Vibration test; 4. Drops impact test; 5. Heat seal integrity; 6. Compression (stacking) test; 7. Observe relevant safety and health precautions when performing the task; 8. Clean tools and work area; 9. Store tools, materials and records appropriately.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Perform food packaging quality test; 1.2. Monitor food packaging quality test. 2.0. Principles The person must be able to explain the following principles: 2.1. Packaging; 2.2. Good Laboratory Practices (GLP); 2.3. Good Hygiene Practices (GHP); 2.4. FEFO and FIFO; 2.4. Good Manufacturing practices (GMP); 2.5. Document management. 3.0. Theories The person must be able to explain: 3.1. Packaging technology; 3.2. Equipment operations; 3.3. Packaging test process; 3.4. Importance of performing packaging quality test; 3.5. Basic mathematics. 4.0. Essential skills 4.1. Practical skills; 4.2. Reasoning and logic; 4.3. Computer skills; 4.4. Communication skills;	

	4.5. Problem solving skills; 4.6. Integrity; 4.7. Writing skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Packaging quality test is performed as per standards governing food manufacturing and process industry
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Documents Handling; 2. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	MONITOR FOOD PACKAGING QUALITY TEST	DUTY NO.	404
TASK TITLE	MAINTAIN FOOD PACKAGING QUALITY TEST RECORDS	TASK NO.	4042
PERFORMANCE CRITERIA	The person performing this task must be able to maintain food packaging quality test records during food production as per approved standards.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a Senior Food technician. The following tools and materials will be needed in performing the task: standard operating procedures, manuals, files, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Obtain relevant tools and materials for the task; 2. Record type of packaging materials to be tested during food production; 3. Record package size; 4. Record the test methods; 5. Document package tests results; 6. Process data results; 7. Observe relevant safety and health precautions when performing the task; 8. Clean tools and work area; 9. Store tools, materials and records appropriately.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Identify types of packaging materials to be tested during food production; 1.2. Keep food packaging quality test records; 1.3. Process data results. 2.0. Principle The person must be able to explain the principles of: 2.1. Record keeping; 2.2. Packaging test process; 2.3. Good Hygiene Practices (GHP); 2.4. FEFO and FIFO; 2.5. Good manufacturing practices (GMP); 2.6. Document management. 3.0. Theories The person must be able to explain: 3.1. Food Packaging technology; 3.2. Equipment operations; 3.3. Packaging test process; 3.4. Basic mathematics. 4.0. Essential skills 4.1. Practical skills; 4.2. Science skills; 4.3. Reasoning and logic;	

	4.4. Computer skills; 4.5. Communication skills; 4.6. Problem solving skills; 4.7. Integrity; 4.8. Writing skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Packaging test records are maintained during production as per approved standards procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about 1. File processing; 2. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	MAINTAIN FOOD LABORATORY INVETORY AND LAYOUT	DUTY NO.	405
TASK TITLE	ESTABLISH FOOD LABORATORY EQUIPMENT INVENTORY	TASK NO.	4051
PERFORMANCE CRITERIA	The person performing this task must be able to establish food laboratory equipment inventory as per approved standard procedures.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: standard operation procedures document, manuals, files, equipment, Personal Protective Equipment (PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
The person performing this task must be able to do the following 1. Obtain right tools and materials required for the task; 2. Identify equipment used in food laboratory; 3. Mark and label testing equipment to determine the placement location; 4. Identify Equipment handling method and establish an operating manual; 5. Identify personnel protective equipment (PPE); 6. Document food laboratory equipment usage record; 7. Perform equipment maintenance and keep records; 8. Keep equipment damage and scrap records; 9. Conduct regular safety check properly; 10. Observe relevant safety and health precautions when performing the task; 11. Clean tools and work area; 12. Store tools, materials and	Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Identify types of equipment used in food laboratory; 1.2. Safe Handling laboratory equipment; 1.3. Identify types of PPE needed for food laboratory practices; 1.4. Document food laboratory Equipment inventory; 1.5. Master the laboratory equipment repair, maintenance and scrap methods; 1.6. Master the necessary handling methods for unexpected safety accidents. 2.0. Principle The person must be able to explain the principles of: 2.1. Good Laboratory Practices (GIP); 2.2. Record keeping; 2.3. Good Hygiene Practices (GHP); 2.4. FEFO and FIFO; 2.5. Good Manufacturing Practices (GMP); 2.6. Document management. 3.0. Theories The person must be able to explain: 2.1. Laboratory Equipment operations;		

records appropriately.	2.2. Laboratory procedures; 2.3. Laboratory safety management knowledge. 4.0. Essential skills 4.1. Practical skill; 4.2. Reasoning and logic; 4.3. Computer skills; 4.4. Communication skills; 4.5. Problem solving skills; 4.6. Management ability; 4.7. Sense of responsibility; 4.8. Integrity; 4.9. Writing skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Equipment inventory in food laboratory is established as per approved standard procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health; 2. Laboratory safety.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	MAINTAIN FOOD LABORATORY INVETORY AND LAYOUT	DUTY NO.	405
TASK TITLE	ESTABLISH REAGENTS AND OTHER CHEMICALS INVENTORY IN FOOD LABORATORY	TASK NO.	4052
PERFORMANCE CRITERIA	The person performing this task must be able to establish inventory of food laboratory reagents and other chemicals as per approved standard procedures.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing the task: Standard operation procedures, manuals, files, equipment, Personal Protective Equipment (PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Obtain tools and materials needed for the task; 2. Conduct acceptance and inbound registration as well as orderly storage; 3. Identify reagents and other chemicals used in food laboratory; 4. Identify reagents and other chemicals handling method; 5. Mark and label reagents; 6. Identify types of Personal Protective Equipment (PPE) to be used when handling laboratory reagents and chemicals; 7. Take stock of the food reagents, chemicals and PPE available in the laboratory; 8. Keep usage record of food laboratory reagents and other chemicals; 9. Clear and record expired reagents and chemicals; 10. Treat waste materials and liquids;		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Identify types of reagents and chemicals used in Food laboratory; 1.2. Safe handling of food laboratory reagents and chemicals; 1.3. Identify types of PPE needed in food laboratory; 1.4. Document food laboratory reagents and other chemicals used; 1.5. Recycle and treat expired reagents, waste materials and liquids; 1.6. Accept and purchase reagents and chemicals. 2.0. Principles The person must be able to explain the principles of: 2.1. Good Laboratory Practices (GLP); 2.2. Record keeping; 2.3. Good Hygiene Practices (GHP); 2.4. FEFO and FIFO; 2.5. Good Manufacturing Practices (GMP); 2.6. Document management. 3.0. Theories: The person must be able to explain: 3.1. Reagents nature; 3.2. Reagents preparation;	

11. Make a reagent procurement plan periodically; 12. Clean work area; 13. Store tools, materials and records appropriately.	3.3. Reagents Handling and preservation; 3.4. Laboratory procedures; 3.5. Waste material and liquid treatment procedures. 4.0. Essential skills 4.1. Practical skills; 4.2. Reasoning and logic; 4.3. Computer skills; 4.4. Communication skills; 4.5. Problem solving skills; 4.6. Management ability; 4.7. Sense of responsibility; 4.8. Integrity; 4.9. Writing skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Inventory and management methods of reagents and other chemicals in food laboratory are established as per approved standard procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational safety and health; 2. Laboratory safety.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	MONITOR ROUTINE MAINTENANCE FOR FOOD CONTACT EQUIPMENT	DUTY NO.	406
TASK TITLE	ESTABLISH EQUIPMENT MAINTENANCE SCHEDULE	TASK NO.	4061
PERFORMANCE CRITERIA	The person performing this task must be able to establish equipment maintenance schedule for food production as per approved standard procedures.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing task, procedures, manuals, files, Equipment, Personal Protective Equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Obtain right tools and material for the task; 2. Establish a maintenance list of equipment required to be maintained; 3. Familiarize with the performance and parameters of equipment maintained; 4. Mark and label the equipment; 5. Identify equipment maintenance method; 6. Prepare maintenance schedule; 7. Identify types of Personal Protective Equipment (PPE) needed to perform maintenance; 8. Store tools and materials appropriately; 9. Keep documented maintenance schedule appropriately for easy reference; 10. Clean work area.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to 1.1. Identify Types of food contact equipment to be maintained; 1.2. Identify Equipment maintenance method; 1.3. Identify Types of PPE needed for maintenance; 1.4. Document maintenance records. 2.0. Principle The person must be able to explain the principles of: 2.1 Equipment Maintenance manuals; 2.2 Record keeping; 2.3 Good Hygiene Practices (GHP); 2.4 FEFO and FIFO; 2.5 Good Manufacturing Practices (GMP); 2.6 Document management. 3.0. Theories The person must be able to explain: 3.1 Maintenance procedures; 3.2 Equipment Handling procedures; 3.3 Equipment performance and parameters. 4.0. Essential skills 4.1. Practical skills; 4.2. Science skills;	

	4.3. Reasoning and logic; 4.4. Computer skills; 4.5. Communication skills; 4.6. Problem identification and solving skills; 4.7. Integrity; 4.8. Carefulness; 4.9. Writing skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Equipment maintenance schedule is established as per approved standard procedures.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Documents Handling; 2. Occupational safety and health.

OCCUPATION	FOOD TECHNICIAN	OCCUPATION CODE	400
DUTY TITLE	MONITOR ROUTINE MAINTENANCE FOR FOOD CONTACT EQUIPMENT	DUTY NO.	406
TASK TITLE	PERFORM EQUIPMENT MAINTENANCE	TASK NO.	4062
PERFORMANCE CRITERIA	The person performing this task must be able to perform equipment maintenance as per approved standard procedures.		
RANGE STATEMENT	The task will be performed in food premises under supervision of a senior Food technician. The following tools and materials will be needed in performing task, procedures, manuals, files, equipment, Personal Protective Equipment (PPE).		
EVIDENCEREQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following 1. Verify maintenance schedule; 2. Verify maintenance procedures; 3. Prepare maintenance checklist; 4. Check the number of maintenance tools, parts and accessories; 5. Identify types of Personal Protective needed to perform maintenance; 6. Conduct equipment maintenance; 7. Test maintained equipment; 8. Inspect the conducted maintenance; 9. Keep maintenance records; 10. Observe health and safety when performing the task; 11. Clean tools, equipment and work area; 12. Store tools, equipment and remaining materials.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Perform equipment maintenance; 1.2. Conduct maintenance inspection; 1.3. Document maintenance records. 2.0. Principles The person must be able to explain the principles of: 2.1 Equipment Maintenance; 2.2 Record keeping; 2.3 Good Hygiene Practices; 2.4 FEFO and FIFO; 2.5 Good Manufacturing Practices; 2.6 Document management. 3.0. Theories The person must be able to explain: 3.1. Equipment Maintenance procedures; 3.2. Equipment Handling; 3.3. Equipment structure identification; 3.4. Maintenance tool usage; 3.5. Personal protective measures. 4.0. Essential skills 4.1. Practical skills; 4.2. Reasoning and logic; 4.3. Computer skills;	

	4.4. Communication skills; 4.5. Problem identification and solving skills; 4.6. Integrity; 4.7. Carefulness; 4.8. Writing skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Maintenance of equipment is performed as per technical standards.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Documents Handling; 2. Occupational safety and health.

TABLE 1: DACUM CHARTS FOR FOOD TECHNICIAN – LEVEL 4

DUTIES	TASKS	ENABLERS
1.0. Inspect the incoming raw materials for food manufacturing.	1.1. Determine the compliance of raw food material with approved specifications. 1.2. Determine the raw food material condition. 1.3. Evaluate food vehicle conditions. 1.4. Conduct quality test of the raw materials.	Generic skills and knowledge • Communication skills • Computer application skills • Equipment operation skills • Use of manufactures manuals and recommendations Tools and equipment • Personal Protective Equipment (PPEs) as safety shoes, glasses, Gloves, Hearing protections, hard hat. • Recording files, pen Materials • Standard operating procedures (SOPs) • Local food standards from Local Authority • International Operating standards (ISO) Worker behaviours • Team work, communication skills, trustworthy, time management and commitments

DUTIES	TASKS	ENABLERS
2.0. Perform warehouse management.	2.1. Perform inbound operation. 2.2. Perform inventory management. 2.3. Perform outbound operation.	Generic skills and knowledge • Communication skills • Computer application skills • Equipment operation skills • Use of manufactures manuals and recommendations Tools and equipment • Personal Protective Equipment (PPEs) as safety shoes, glasses, Gloves, Hearing protection device, hard hat. • Recording files, pen Materials • Standard operating procedures (SOPs) • Local food standards from Local Authority • International Operating standards (ISO) Worker behaviors • Teamwork, communication skills, trustworthiness, time management and commitments

DUTIES	TASKS	ENABLERS
3.0. Conduct cleaning and sanitation program of food processing equipment.	3.1. Establish cleaning method of food processing equipment. 3.2. Prepare cleaning reagents and tools for food processing equipment. 3.3. Perform cleaning of the food processing equipment. 3.4. Verify effectiveness of food processing equipment cleaning program.	<u>Generic skills and knowledge</u> • Communication skills • Computer application skills • Equipment operation skills • Use of manufactures manuals and recommendations Tools and equipment • Personal Protective Equipment (PPEs) as safety shoes, glasses, Gloves, Hearing protections, hard hat. • Recording files • Pen Materials • Standard operating procedures (SOPs) Worker behaviours • Team work • Communication skills • Trustworthy • Time management and commitments

DUTIES	TASKS	ENABLERS
4.0. Monitor food packaging quality test.	4.1. Perform food packaging quality test. 4.2. Maintain food packaging quality test records.	Generic skills and knowledge • Communication skills • Computer application skills • Equipment operation skills • Use of manufactures manuals and recommendations Tools and equipment • Personal Protective Equipment (PPEs) as safety shoes, glasses, Gloves, Hearing protections, hard hat. • Recording files, pen Materials • Standard operating procedures (SOPs) • Local food standards from Local Authority • International Operating standards (ISO) Worker behaviours • Team work • Communication skills • Trustworthy • Time management and commitments

DUTIES	TASKS	ENABLERS
5.0. Maintain food laboratory inventory and layout.	5.1. Establish food laboratory equipment inventory. 5.2. Establish reagents and other chemicals inventory in food laboratory.	Generic skills and knowledge • Communication skills • Computer application skills • Equipment operation skills • Use of manufactures manuals and recommendations Tools and equipment • Personal Protective Equipment (PPEs) as safety shoes, glasses, Gloves, Hearing protections, hard hat. • Recording files, pen Materials • Standard operating procedures (SOPs) • Local food standards from Local Authority • International Operating standards (ISO) Worker behaviours • Team work • Communication skills Trustworthy • Time management and commitments

DUTIES	TASKS	ENABLERS
6.0. Monitor routine maintenance for food contact equipment.	6.1. Establish equipment maintenance schedule. 6.2. Perform equipment maintenance for food production.	Generic skills and knowledge • Communication skills • Computer application skills • Equipment operation skills • Use of manufactures manuals and recommendations Tools and equipment • Personal Protective Equipment (PPEs) as safety shoes, glasses, Gloves, Hearing protections, hard hat. • Recording files, pen Materials • Standard operating procedures (SOPs) Worker behaviours • Team work • Communication skills Trustworthy • Time management and commitments