

**REPUBLIC OF KENYA**

**NATIONAL OCCUPATIONAL STANDARDS**

**FOR**

**MEAT PRODUCTS PROCESSING ATTENDANT**

**KNQF LEVEL 4**

**OCCUPATIONAL STANDARD ISCED CODE: 0721 454A**

First published 2018

Revised 2024

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# FOREWORD

The provision of quality education and training is fundamental to the Government’s overall strategy for social economic development. Quality education and training will contribute to achievement Kenya’s development blue print and sustainable development goals.

Reforms in the education sector are necessary for the achievement of Kenya Vision 2030 and meeting the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution and this resulted to the formulation of the Policy Framework for Reforming Education and Training. A key feature of this policy is the radical change in the design and delivery of the TVET training. The policy document requires that training in TVET shall be competency based, curriculum development shall be industry led, certification shall be based on demonstration of competence and mode of delivery shall allow for multiple entry and exit in TVET programmes.

These reforms demand that Industry takes a leading role in curriculum development to ensure the curriculum addresses its competence needs. It is against this background that these Occupational Standards were developed for the purpose of developing a competency-based curriculum for meat processing level 4. These Occupational Standards will also be the basis for assessment of an individual for competence certification.

It is my conviction that these Occupational Standards will play a great role towards development of competent human resource for the Meat sector’s growth and sustainable development.

# PREFACE

Kenya Vision 2030 aims to transform the country into a newly industrializing, “middle-income country providing a high-quality life to all its citizens by the year 2030”. Kenya intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy through life-long education and training. TVET has a responsibility of facilitating the process of inculcating knowledge, skills and attitudes necessary for catapulting the nation to a globally competitive country, hence the paradigm shift to embrace Competency Based Education and Training (CBET).

The Technical and Vocational Education and Training Act No. 29 of 2013 on Reforming Education and Training in Kenya, emphasized the need to reform curriculum development, assessment and certification. This called for shift to CBET to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labour force.

TVET experts in Food Technology in conjunction with meat Sector Skills Advisory Committee (SSAC) have developed these Occupational Standards for a meat attendant. These occupational standards will be the basis for development of competency-based curriculum for meat processing level 4. These Standards will also be the basis for assessment of an individual for competence certification.

The occupational standards are designed and organized with clear performance criteria for each element of a unit of competency. These standards also outline the required knowledge and skills as well as evidence guide.

I am grateful to the Council Members, Council Secretariat, meat SSAC, expert workers and all those who participated in the development of these occupational standards.

# ACKNOWLEDGMENT

These Occupational Standards were developed through combined effort of various stakeholders from private and public organizations. I am sincerely thankful to the management of these organizations for allowing their staff to participate in this course. I wish to acknowledge the invaluable contribution of industry players who provided inputs towards the development of these Standards.

I thank ….. for providing guidance on the development of these Standards. My gratitude goes to the meat Sector Skills Advisory Committee (SSAC) members for their contribution to the development of these Standards. I thank all the individuals and organizations who participated in the validation of these Standards.

I acknowledge all other institutions which in one way or another contributed to the development of these Standards.

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# ABBREVIATIONS AND ACRONYMS

|  |  |
| --- | --- |
| CBET | Competency Based Education and Training |
| GMP | Good Manufacturing Practices |
| HACCP | Hazard Analysis Critical Control Point |
| ICT | Information Communication Technology |
| KCSE | Kenya Certificate of Secondary Education |
| KNQA | Kenya National Qualifications Authority |
| NEMA | National Environmental Management Authority |
| PPE | Personal Protective Equipment |
| SOP | Standard Operation Procedures |
| TVETA | Technical and Vocational Education and Training Authority |

## KEY TO ISCED UNIT CODES

**Sector / Industry**

**Sub Sector**

**Occupational Area**

**Version Control**

**Unit of Competence Number**

**ISCED level, Programme Orientation and Level of Completion**

xx

x

xxx

x

x

x

# OVERVIEW

Meat Products Processing Level 4 occupation standard consists of competencies that a person must achieve to produce meat products, package processed meat products, meat products hygiene management and manage records and documents.

The units of competency leading to Meat Products Processing Level 4 qualification include the following core competencies:

**CORE UNITS OF COMPETENCY**

|  |  |
| --- | --- |
| **Unit Code** | **Unit Title** |
| 072145101A | Produce meat products |
| 072145102A | Package processed meat products |
| 072145103A | Meat products hygiene management |
| 072145104A | Manage records and documents |

## PRODUCE MEAT PRODUCTS

**UNIT CODE:** 072145101A

**UNIT DESCRIPTION**

This unit specifies the competencies required to produce meat products. It involves assessing animal meat quality, meat curing, process meat products.

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Assess animal meat quality | 1. ***PPE’s, Tools and equipment*** are identified and gathered as per the task requirement 2. Objectives of assessing meat quality are identified. 3. Terminologies related to assessing meat quality are defined. 4. Factors that influence meat quality are determined. 5. Methods of assessing meat quality are identified 6. Animal meat quality determined based on the meat grading manual. |
| 1. Cure Meat | * 1. Cured meat is defined as per workplace procedure.   2. Cured meat types are identified as per product specifications.   3. Common curing ingredients are identified and assembled.   2.4 Cured meat products examples are identified as per product specification. |
| 1. Process meat products | 1. Meat products identified based on the species and market demand 2. Ingredients identified and assembled according to the products 3. ***Ingredients*** weighed based on the products and work place procedures 4. Meat products processed based on the product requirements and SOPs |
| 1. Preserve processed meat products | * 1. Objective of meat preservation are identified.   4.2 The processed products preserved according to the products requirements and ***SOPs***  4.3 Principles of meat preservation are identified as per products specification.  4.3.1 Temperature  4.3.2 Moisture control  4.3.3 Packaging  4.3.4 Chemical preservation  4.4 Tools and equipment used in meat preservation identified and assembled.  4.4.1 Refrigerator  4.4.2 Dehydrator  4.4.3 Smoking chambers  4.4.4 Smoke House  4.5 Factors determining choice of preservation methods are identified as per workplace procedure.  4.6 Meat spoilage and causative factors are identified as per workplace procedure. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| Variable | Range |
| 1. PPEs may include but are not limited to: | * Gumboots * Overall * Masks * Gloves * Dustcoats |
| 1. Tools and equipment may include but are not limited to: | * Meat grinder * Knives * Hand bone saw * Sharpening steel * Buckets * Stainless steel * Grating plates * Bowl choppers * Mincers * Casing machines * Thermometers * Chopping boards * Knives * Refrigerators * Cold Rooms * Blast Freezers * Sausage filler * Meat mixer * Vacuum meat tumbler * Brine injector * Sausage tying Machine |
| 1. Ingredients may include but are not limited to: | * Salt * Spices * Food colors * Binders * Preservatives * Fillers * Sausage casings |
| 1. Standard Operating Procedures may include but are not limited to: | * Hazard Analysis Critical Control Point (HACCP) and Good manufacturing Practices (GMP) * Good Hygiene Practices * ISO 22000 food standards * SPS * BRC * Work place procedures * Halaal |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Observation
* Time management
* Public relations
* Weighing

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Meat grading
* Factors influencing meat quality
* Objectives of processing
* Methods of meat product processing
* Food additives
* Good manufacturing practices (GMP and GHP)
* Legislation in meat products processing
* Objective of meat preservation
* Meat spoilage

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   1. Assessed animal meat quality as per the workplace SOPs 2. Processed meat products as per the workplace manual 3. Preserved processed meat products as per the meat commission act |
| 1. Resource Implications | The following resources must be provided:   1. Workplace or assessment location 2. PPEs 3. Materials, tools, and equipment |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical assessment   2. Observation   3. Demonstration   4. Oral presentation/ questioning   3.4 Written tests |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. Industrial training   4.4 Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

## PACKAGE MEAT PRODUCTS

**UNIT CODE: 072145102A**

**UNIT DESCRIPTION**

This unit specifies the competencies required to package meat products. It involves weighing meat products, packaging processed meat product, labeling meat packaged products and cleaning packaging equipment.

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Weigh meat products | 1. ***PPE’s, Tools and equipment***are identified and gathered as per the task requirement 2. Processed meat products weighed according to the task requirements and SOPs 3. Legislation related to weighing are adhered to as per SOPs. |
| 1. Package processed meat product | 1. Packaging materials identified and assembled based on the task requirements 2. Processed meat products packaged as per the product requirements and work place procedures   2.3 Objectives of packaging are applied as per workplace procedure  2.4 Requirements for packaging material are identified as per product specification  2.5 Types of packaging material are identified as per statutory standards  2.6 Methods of packaging are applied as per workplace procedures  2.7 Hygiene practices in packaging meat are applied as SOPs   * 1. Environmental issues related to processing and packaging   2.9 Legislation in meat products packaging |
| 1. Label meat packaged products | 1. Labelling objectives are identified. 2. Labeling tools, equipment and materials identified and gathered as per the task requirements 3. Processed products assembled according to task requirements 4. Processed meat products labeled based on products requirements and ***SOPs*** 5. Legislation in meat products labeling is identified as per meat standards.   3.6 Hygiene practices in labeling are applied as per workplace SOPs |
| 1. Clean packaging equipment | * 1. Objectives of cleaning are identified as per equipment cleaning SOPs.   2. Cleaning tools, equipment and materials gathered as per the task requirements   3. Equipment cleaned as per equipment cleaning SOPs   4. Meat packaging equipment is maintained as per the workplace procedures   5. Hygiene in handling meat packaging and labelling equipment is done as per workplace procedures.   6. Storage of tools and equipment is applied as per the equipment manual. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| Variable | Range |
| 1. PPEs may include but are not limited to: | * Gumboots (White) * Over all * Hairnets/Caps * Masks * Gloves * Dust coats (White) |
| 1. Tools and equipment may include but are not limited to: | * Filler * Labelling machine * Packaging machine * Casings |
| 1. Tools and equipmentmay include but are not limited to: | * Meat grinder * Knives * Hand bone saw * Sharpening steel * Buckets * Stainless steel * Grating plates * Bowl choppers * Mincers * Casing machines * Thermometers * Chopping boards * Knives |
| 1. Standard Operataing Porceduresmay include but are not limited to: | * Hazard Analysis Critical Control Point (HACCP) and Good manufacturing Practices (GMP) * Good Hygiene Practices * ISO 22000 food standards * SPS * Work place procedures |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills

* Observation
* Time management
* Public relations
* Weighing
* Numeracy

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Objectives of meat products packaging
* Hygiene practices in meat products packaging and labeling
* Legislation related to meat products packaging
* Environmental issues related to meat products packaging and labeling
* Hygiene practices in packaging and labeling

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate   1. Weighed meat products as per the workplace procedures 2. Package meat processed products as per the SOPs 3. Label processed meat product as per the workplace procedures 4. Clean the used tools and equipment as per the workplace manual |
| 1. Resource Implications | The following resources must be provided:   1. Workplace or assessment location 2. PPEs 3. Materials, tools, and equipment |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Demonstration   3. Observation   3.4 Oral presentation/ questioning  3.5 Written tests |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. Industrial training.   Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

## MANAGE MEAT PRODUCTS HYGIENE

**UNIT CODE: 072145103A**

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage meat products hygiene. It involves manage personnel hygiene, manage facility hygiene, manage equipment hygiene, manage product hygiene, manage environmental hygiene and apply job entry requirements.

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1.Manage personnel hygiene | 1. ***PPE’s, Tools and equipment*** are identified and gathered as per the task requirement    1. Definition of terminologies were identified as per workplace standards.    2. Objectives of personnel hygiene are identified as per GMPs    3. Personal hygiene practices are applied as per workplace SOPs    4. Legal requirements in personnel hygiene applied as per workplace requirements |
| 2.Manage facility hygiene | * 1. Objectives of facility hygiene are identified as per GMPs   2. Cleaning and Sanitation procedures are applied as per SOPs   3. Detergents and disinfectants are applied as per workplace requirements   4. Water quality is determined as per SOPs   5. Cleaning tools, equipment are cleaned and maintained as per workplace procedures   6. Facility drainage system cleaned and maintained as per workplace procedures |
| 3.Manage equipment hygiene | * 1. Objectives of equipment hygiene management are identified as per workplace procedures.   2. Equipment cleaning and washing procedures are applied as per SOPs   3. Equipment disinfection and sterilization is done as per SOPs |
| 4. Manage product hygiene | 4.1 Objectives of product hygiene management are identified as per GMPs   * 1. Hygiene protocols in product hygiene management are applied as per GMPs      1. Cleaning and sanitation procedures are applied as per SOPs      2. Cross contamination prevention is done as per HACCP procedures      3. Temperature control is applied as per workplace procedures      4. Waste management is done as per statutory requirements.      5. Packaging hygiene is applied as per SOPs      6. Compliance with regulations and standards as per KEBs standards for meat processing.   2. Safe handling of products is done as per HACCP procedures.   3. Product safety assessment is done as per GMPs   4.5 Disposal of condemned products is done as per HACCP procedures. |
| 5. Manage environmental hygiene | 5.1 Objectives of environmental hygiene management are identified as per NEMA regulations.  5.2 Solid and liquid wastes management is treated as per NEMA regulations.  5.3 Effects of climate change on environmental hygiene is applied as per workplace SOPs.  5.4 Vermin and pest control is done as per GMPs. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| Variable | Range |
| 1. PPEs may include but are not limited to: | * White gumboots * White plastic aprons * White dust coat * White caps/Hairnets * Masks * Hand gloves * Safety goggles |
| 1. Tools and equipment may include but are not limited to: | * Squeezers * Hard brooms * Brushes * Mops * Vacuum machines * Buckets * Wheel barrows |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Observation
* Time management
* Public relations
* Weighing
* Numeracy

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Types of tools, equipment and PPEs
* Meat animal by-products
* Utilization of Meat animal by-products
* Legislation related to animal by-products
* Record keeping and management

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate   1. Manage personnel hygiene as per the GMPs 2. Manage facility hygiene as per the HACCP 3. Manage equipment hygiene as per the GMPs 4. Manage product hygiene as per the HACCP 5. Manage environmental hygiene as required by NEMA 6. Apply job entry techniques as per workplace procedures |
| 1. Resource Implications | The following resources must be provided:   1. Meat Workshop or assessment location 2. PPEs 3. Materials, tools, and equipment |
| 1. Methods of Assessment | Competency may be assessed through:  3.1 Practical  3.2 Observation  3.3 Demonstration  3.3 Oral presentation/ questioning  3.4 Written tests |
| 1. Context of Assessment | Competency may be assessed:  4.1 On the job  4.2 Off the job  4.3 Industrial training  4.4 Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment | 5.1Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

## MANAGE RECORDS AND DOCUMENTS

**UNIT CODE: 072145104A**

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage products processing records and documents. It involves gathering the required documents, recording meat products stocks and the manage records and documentation.

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Gather the required documents | 1. Documents gathered as per the work place procedures 2. Proper documentation as per the workplace procedures 3. Licensing and permits are gathered as per Kenya Meat Commission Act and regulations. |
| 1. Record meat products stocks | 1. Meat product records maintained as per the task requirements and work place procedures 2. Follow first in and first out procedures as per workplace procedures 3. Regular stock audits as per workplace standards |
| 1. Store the meat products processing records and documents | 1. Documents filed as per the work place procedures 2. Documents and files stored as per the work place procedures 3. Compliance with regulatory standards as per statutory requirements |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Tools and materials may include but are not limited to: | * File cabinets * Computers * Printers * Projectors * Scanners * Assorted stationary * Toners * Cartridges |
| 1. Meat product records may include but are not limited to: | * Inventory records * Types of meat products * Numbers of products * Types of packaging and labelling materials * Production schedules * Workers shift records * Warehouse Records * Dispatch records |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Observation
* Time management
* Public relations

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Importance of record keeping
* Types of records and documents
* Required records/accounting books
* Document storage methods
* Disposal of unwanted records

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   1. Gathered the required documents as per the task requirements 2. Recorded processed meat products stocks as per the workplace procedures 3. Stored the meat products processing records and documents as per the workplace SOPs |
| 1. Resource Implications | The following resources must be provided:   1. Office 2. Office desk 3. Computer 4. Files 5. Office stationary |
| 1. Methods of Assessment | Competency may be assessed through:   1. Observation 2. Oral presentation/ questioning 3. Written tests |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. Industrial training   Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment | 5.1 Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |