

DAIRY PRODUCT QUALITY ASSURANCE

ISCED UNIT CODE: 0721 551 19A

TVET CDACC UNIT CODE: DA/CU/PM/CR/02/7/MA

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Conduct Dairy Product Quality Assurance

Duration: 120 Hours

Unit Description

This unit specifies the competencies required to Conduct Dairy Product quality assurance. It involves Applying quality control systems, applying quality control Regulation, carrying out Raw milk quality Analysis.

Summary of Learning Outcomes

By the end of this unit, the learner should be able to:

S/No	Learning Outcomes	Duration (Hours)
1.	Apply quality control systems	30
2.	Apply quality control Regulation	30
3.	Carry out Raw milk quality Analysis	60
Total		120

Learning Outcomes	Content	Suggested Assessment Methods
1. Apply quality control systems	4.1 Concept of Quality Control 4.2 Quality characteristics of milk 4.3 Organoleptic 4.4 nutritional and compositional 4.5 Food safety hazards 4.6 Importance of Quality Control 4.7 Methods of quality assessment 4.8 Objective methods 4.9 Subjective methods 4.10 Quality Control Systems 4.11 ISO standards	<ul style="list-style-type: none">Written testsInterviews/ Oral questionsPractical reportsIndividual/group assignmentsCase Studies <p>Third party report</p>

	4.12 HACCP 4.13 GMP 4.14 GHP 4.15 GAP 4.16 Quality control Regulation 4.17 KEBS 4.18 Public Health Act 4.19 Kenya Dairy Board 4.20 Statistical Methods 4.21 Factors affecting quality of Raw Milk 4.22 Genetic factors 4.23 Production factors 4.24 Laboratory reagents, tools and equipment 4.25 Laboratory reagents 4.26 Types 4.27 Preparation of laboratory reagents 4.28 Laboratory tools and equipment 4.29 Laboratory safety rules 4.30 Raw milk quality Analysis 4.31 Raw milk quality tests 4.32 Organoleptic 4.33 Microbiological tests 4.34 Compositional test 4.35 Physical /chemical tests 4.36 Record-keeping 4.37 Types of records 4.38 Importance of record keeping	
2. Apply quality control Regulation	2.1 Quality control Regulation 2.1.1 KEBS 2.1.2 Public Health Act 2.1.3 Kenya Dairy Board	
3. Carryout Raw milk quality Analysis	3.1 Raw milk quality Analysis 3.1.1 Raw milk quality tests 3.1.1.1 Microbiological tests 3.1.1.2 Compositional test	<ul style="list-style-type: none"> • Written tests • Interviews/ Oral questions • Practical reports

		<ul style="list-style-type: none"> • Individual/group assignments • Case Studies • Third party report
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Suggested Methods of Instruction

- Demonstrations
- Group discussion
- Direct instruction
- Role playing

Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	Learning Materials			
9.	Textbooks		5 pcs	1:5
10.	Production Manuals		5	1;5
11.	PowerPoint presentations	For trainer's use		
12.	Projector		1	1;25
13.	Assorted Flash Cards		5	1;5
14.	Whiteboard		1	1;25
15.	Rolls flip charts		1	1;25
16.	Assorted color of whiteboard markers	For trainers Use		
B	Learning Facilities & infrastructure			
4.1	Lecture/theory room		1	1:25
4.2	Workshop		1	1:25
4.3	Laboratory		1	1:25
4.4	Site/industry		1	1:25
C	Consumable materials			
11.	Raw milk		1ltr	1:5
12.	Cream		10mls	10:5
13.	Yoghurt		1	1;5
14.	Butter		-	-

15.	Ghee		1ltr	1:5
16.	Ethanol		100mls	100;5
17.	Sodium Hydroxide		500mls	500;5
18.	Resazurin solution		10mls	10:5
19.	Iodine	-	-	-
20.	Phenolphthalein indicator	-	-	-
D	Tools and Equipment			
11.	Alcohol gun	5 pcs	1:5	
12.	Lactometer	5pcs	1;5	
13.	Thermometer	5 pcs	1:5	
14.	Centrifuge	1 pcs	1:25	
15.	Clarifier	1pcs	5:25	
16.	Pasteurizer	1 pcs	1:25	
17.	Homogenizer	1 pcs	1:25	
18.	Lovi bond Comparator	1pcs	1:25	
19.	Source of heat	1	1:25	
20.	Refractometer	5	1;25	