

NQF 2 FACT SHEET NATIONAL CERTIFICATE: RAW MILK CREAM HANDLING AND STORAGE

SAQA registered qualification ID: 74229

OVERVIEW

This qualification will ensure that the person who receives bulk milk or cream at a dairy reception facility can monitor the acceptability of bulk raw milk or cream and receive it not the processing system, thereby contributing to the quality assurance of dairy products. This qualification provides the backbone to any career opportunities within the dairy manufacturing environment.

MODULE CONTENT:

FUNDAMENTALS:

NUMERACY:

FOUNDATIONAL PRINCIPLES:

- Use and analyse computational tools and strategies, and make estimates and approximations.
- Demonstrate understanding of numbers and relationships among numbers and number systems.
- Convert flexibly between and within various representations of functions.
- Compare, analyse and describe the behaviour of patterns and functions.
- Represent situations mathematically in order to interpret and solve problems.
- Estimate, measure and calculate physical quantities to solve problems in practical situations.
- Explore transformations of two dimensional geometric figures.

FINANCIAL CALCULATIONS:

- Use mathematics to plan and control personal and/or household budgets and income and expenditure.
- Use simple and compound interest to make sense of and define a variety of situations.

BASIC STATISTICS:

- Apply various techniques to organise and represent data in order to model situations.
- Give opinions on the implications of the modelled data for the required purpose
- Interpret and determine chance variation

COMMUNICATION:

FOUNDATIONAL PRINCIPLES:

- Use a range of reading and/or viewing strategies to make meaning to texts.
- Identify the main ideas in different text types.
- Read/ view and respond to texts for a variety of purposes.
- Identify and discuss how language structures and features may influence a reader/ audience.

WRITTEN COMMUNICATION:

- Write/ sign for a specific audience, purpose and context.
- Use grammatical structures and writing/ signing conventions to produce coherent and cohesive texts for specific contexts.
- Adapt language to suit context.
- Draft and edit own writing/ signing.

SPOKEN COMMUNICATION:

- Use a variety of speaking and listening/signing strategies to maintain communication.
- Adapt speech/ signing to accommodate socio-cultural sensitivities without losing own interest.
- Use knowledge of language structures and conventions to shape or decode meaning of unfamiliar vocabulary or constructions.
- Organise and present information in a focused and coherent manner.
- Identify and explain how speakers/ signers influence audiences.

LANGUAGE IN OCCUPATIONAL LEARNING:

- Find and use available learning resources.
- Use learning strategies.
- Manage occupational learning materials.
- Plan and gather relevant information for a given context and purpose.
- Function in a team.
- Reflect on how characteristics of the workplace and occupational context affect learning.

CORE AND ELECTIVES:

BASIC DAIRY:

- Maintain personal hygiene,
- Maintain personal health and well-being,
- Maintain personal grooming and presentation,
- Demonstrate an understanding of personal safety in a food or sensitive consumer product environment,
- Apply personal safe working practices regarding the work area and equipment,
- Deal with safety emergencies,
- Safely handle and store raw materials or final products or chemicals in a food or sensitive consumer product environment.
- Dairy equipment used in the dairy industry,
- Dairy terminology used in the dairy industry,
- Dairy supporting functions and equipment used in the dairy industry,
- Dairy processing systems.

- Demonstrate an understanding of food safety,
- Apply corrective procedures based on an understanding of food safety hazards,
- Demonstrate an understanding of good manufacturing practices in a food handling environment.
- demonstrate an understanding of the origin, nutritional importance, physical properties of milk,
- The transformation of milk into commercial dairy products.

MILK RECEIVING:

- Demonstrate an understanding of milk or cream reception equipment and storage areas and bulk collection on the farm
- Prepare for raw milk or cream intake at the milk reception area, and bulk milk collection
- Transfer milk from a tank to a bulk milk tanker on the farm and receive and store raw milk or cream at the milk reception area
- Perform end of process duties.
- Demonstrate an understanding of the manual cleaning and sanitising procedures for food manufacturing equipment and surfaces, and a cleaning-in-place systems
- Prepare to clean and sanitise an FMCG processing system, using a CIP system and manually,
- Clean and sanitise an FMCG processing system, using a CIP system and manually,
- Perform procedures at the end of CIP and COP.
- Demonstrate an understanding of representative sampling,
- Prepare for sampling,
- Take a representative sample,
- Maintain records of sampling.
- Demonstrate an understanding of temperature determination in a food handling environment,
- Prepare for temperature determination,
- Determine temperatures,
- Report on temperature determinations.

LABS:

- Demonstrating an understanding of:
 - The nature of matter
 - The nature of water,
 - Temperature, energy and heat,
 - Introductory principles of physics.
- Demonstrate an understanding of, prepare, perform and report on the following lab procedures:
 - the protein stability of milk,
 - Fat determination as determined by gerber or babcock
 - pH
 - antibiotics
 - Titratable acidity
 - Resazurin
 - Freezing point

UNIT STANDARDS:

		ID	UNIT STANDARD TITLE	NQF LEVEL	CREDITS	DURATION
FUNDAMENTALS	Numeracy	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life.	2	3	5 DAYS
		7480	Demonstrate understanding of rational and irrational numbers and number systems.	2	2	
		9007	Work with a range of patterns and functions and solve problems.	2	5	
		9008	Identify, describe, compare, classify, explore shape and motion in 2-and 3-dimensional shapes in different contexts.	2	3	
		9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	2	3	
	Communication	119454	Maintain and adapt oral/signed communication.	2	5	5 DAYS
		119456	Write/ present for a defined context.	2	5	
		119460	Use language in occupational learning programmes	2	5	
		119463	Access and use information from texts.	2	5	
Dairy basics	Core	120404	Maintain personal hygiene, health and presentation in a food handling environment	1	4	8 DAYS
	Core	120416	Apply personal safety practices in a food or sensitive consumer product environment.	2	5	
	Core	120412	Demonstrate an understanding of dairy terminology, equipment and systems.	1	4	
	Elective	120403	Apply good manufacturing practices as part of a food safety system.	2	4	
	Core	120245	Demonstrate an understanding of the nature of milk and its transformation into commercial dairy products.	3	6	
Milk receiving	Core	120410	Clean and sanitise food manufacturing equipment and surfaces manually.	1	4	11 DAYS
	Core	120405	Clean and sanitise a fast moving consumer goods (FMCG) processing system using an automated cleaning- in-place (CIP) system.	2	5	
	Core	120413	Receive and store raw milk or cream in a silo at a milk reception facility.	2	8	
	Elective	336819	Collect bulk milk from the farm by means of a bulk milk tanker	2	8	
	Core	120401	Take a representative food sample.	1	4	
	Core	120398	Measure the temperature of food products and evaluate the readings.	1	2	

Labs	Core	120418	Evaluate the quality of milk in terms of its protein stability as indicated by the alizarol test.	2	3	11 DAYS
	Core	120241	Evaluate the quality of a dairy product in terms of its fat content, as determined by the Gerber or Babcock fat determination method.	3	5	
	Core	120411	Evaluate the quality of a food product in terms of its pH.	3	4	
	Core	120407	Evaluate the quality of raw milk in terms of its antibiotics content.	2	5	
	Elective	120397	Evaluate the quality of a food product in terms of its titratable acidity.	2	4	
	Core	120402	Demonstrate an understanding of introductory principles of chemistry and physics.	2	5	
	Elective	120395	Evaluate the quality of raw milk in terms of its microbial load, as indicated by the resazurin test.	3	5	
	Elective	120408	Evaluate the quality of milk in terms of its freezing point.	3	4	
					125 credits	40 DAYS