

**National Competency Standards Level 5 for
“Food Technology”**



**National Vocational and Technical Training Commission,
Islamabad**

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1. INTRODUCTION

Food Industry is the second largest employer in Pakistan, and demand for processed food has shown tremendous increase due to busy life and increased awareness about food safety and hygiene. Production of skilled human resources in the area of food processing and preservation always will help to create business opportunities as well as jobs at the local community levels. The present Federal Government has rightly recognized the immense potential of food processing and preservation in our country and is now taking steps to tap this potential to overcome the shortfalls in the food sector. The goal of this course is to provide students with a fundamental understanding of food preservation techniques and to ensure that students are technically ready for entrepreneurship or jobs in the food industry through a practical, problem-solving approach.

Pakistan has an ideal climate nature and has blessed for growing a variety of a large number of fruits and vegetables. According to the agriculture department, 30% of fruits and vegetables are wasted due to negligence and lack of processing facilities. Most of the food industry in Pakistan is concentrated in Punjab (60%) followed by Sindh (30%), KPK (6%), Baluchistan (2%), and ICT (2%). In total, there are approximately 2500+ food processing units in Pakistan. Pakistan's food processing industry is broadly categorized into the following 4 sub-sectors:

Value-added and frozen food processing sectors, including canned foods

Edible oils and Fats manufacturing/processing units

Beverage production units

Bakery and confectionary manufacturing units.

Preservation can be done by chilling, freezing, canning, fermentation, concentration, dehydration, smoking, by different chemical agents, and various non-thermal techniques. Production of a range of foods using these manufacturing techniques and processes is adopted by the food industries. Students will develop an understanding of shelf life and nutritional consequences of preservation.

The students will learn methods to process and preserve different types of foods, sampling techniques, food handling, GMPs, HACCP, food defense, different food contaminations, food quality control, quality assurance, food storage, and food shipping, etc.

The main goal of this course on food preservation processing technologies is to prepare a student as a supervisor for efficient food processing to increase the productivity with effective quality control and to preserve the environment and fulfill consumer expectations.

2. PURPOSE OF THE QUALIFICATION

The purpose of this qualification is to give the trainee a thorough understanding of food processing and preservation in the industry with effective quality control and safety of the products. Food processing and preservation are diversified and continuously subject to changes. It is therefore important to stress the need for a multidisciplinary approach to meet the challenges within the food sector. Upon successful completion of this course the trainees should be able to:

- Explain the core elements of food processing and preservation techniques
- Understand the chemistry underlying the properties and reactions of various food components
- Understand the principles behind analytical techniques associated with food.
- Be able to use the laboratory techniques common to basic and applied food chemistry.
- Understand the basic principles and practices of cleaning and sanitation in food processing operations.
- Be able to apply the principles of food science to control and assure the quality and safety of food products.
- Be aware of current topics of importance to the food industry.
- Work effectively with others; provide supervision in a variety of situations and can deal with individual and/or group conflict.

3. VALIDATION

These national qualifications have been validated by the Qualification Validation Committee (QVC) on 08-12 June 2020 in Lahore and will remain valid until May 2023.

4. DATE OF REVIEW

These national qualifications may be reviewed in June 2023

5. CODE OF QUALIFICATION

The International Standard Classification of Education (ISCED) is a framework for assembling, compiling, and analyzing cross-nationally comparable statistics on education and training, ISCED codes for these qualifications as assigned as follow:

ISCED Classification for Food Technology level 5	
Code	Description
000000000	National Vocational qualification Level-2 in Skilled Worker/ Junior Lab Attendant
000000000	National Vocational qualification Level-3 in Line Supervisor/ Lab attendant
000000000	National Vocational qualification Level-4 in Assistant Food Supervisor/Sr. Lab Attendant
000000000	National Vocational qualification Level-5 in Food Supervisor / Lab technician / Operator

6. QUALIFICATION DEVELOPMENT COMMITTEE

The following members participated in the qualifications development workshop from 08-12 June 2020 in Lahore:

S#	Name	Designation	Organization
1.	Dr. Sanaullah Iqbal	Associate Professor	UVAS, Lahore
2.	Dr. Shinawar Waseem Ali	Assistant Professor	University of the Punjab, Lahore
3.	Dr. Muhammad Khalid Saeed	Senior Scientific Officer	PCSIR Laboratories Complex, Lahore
4.	Dr. Imran Kalim	Senior Scientific Officer	PCSIR Laboratories Complex, Lahore
5.	Dr. Shahid Masood	Senior Scientific Officer	PCSIR Laboratories Complex, Lahore
6.	Miss Naseem Zahra	Scientific Officer	PCSIR Laboratories Complex, Lahore
7.	Mr. Muhammad Ahmad	Quality Manager	LabOnline Blzware (Pvt) Limited
8.	Mr. Engr. Rizwan Saeed Ahmad	Assistant Manager	P-TEVTA
9.	Mr. Mubeen Arshad Awan	QA Head	Yum Groups
10.	Mr. Shoaib Awan	Factory Manager	Lotte Kolsan
11.	Mr. Muhammad Asim	Assistant Director, SS& C WING	NAVTTTC, Islamabad
12.	Mr. Muhammad Nasir Khan	DACUM Facilitator EX-DD, SS&C Wing	NAVTTTC, Islamabad

7. QUALIFICATION VALIDATION COMMITTEE

The following members participated in the qualifications validation workshop from July 20, 2020 to July 24, 2020 in Lahore:

Sr.	Name	Designation
1.	Dr. Shinawar Waseem Ali	Assistant Professor ,Institute of Agricultural Sciences, University of the Punjab, Lahore
2.	Miss Naseem Zahra	Scientific Officer ,PCSIR Laboratories Complex, Lahore
3.	Mr. Mubeen Arshad Awan	Quality Assurance Head ,YUM Group, Ex DD PFA
4.	Mr. Muhammad Ahmad	Quality Manager , Labonline Bizware (PLC)
5.	Mr. Izhar-ul-Haq Awan	Supplier Development Manager, PEPSICO International
6.	Mr. Naeem-ur-Rehman Zafar	Deputy Manager Technical Application, AB Mauri Pakistan Pvt. Ltd.
7.	Mr. Hafiz Rehan Nadeem	Secretary General , National Alliance for Safe Food, Pakistan
8.	Dr. Muhammad Ajmal	Representative P-TEVTA HOD, Food Technology , Govt. College of Technology, Sahiwal
9.	Ms. Samina Qulsoom	Representative S-TEVTA Principal/ HOD, Food Technology , Govt. College of Technology, Karimabad Karachi
10.	Mr. Ibrahim Anwar	Representative KP-TEVTA, Lecturer, Food Technology , Govt. College of Technology, Nowshera
11.	Mr. Kiffayat ullah Khan	Representative B-TEVTA, HOD Food Technology , Govt. Polytechnic Institute, Khanozia
12.	Mr. Shaukat Ali Rana	Representative PBTE Deputy Controller Examination
13.	Mr. Muhammad Nasir Khan	DACUM Facilitator, Ex-Deputy Director, SS&C Wing, NAVTTC
14.	Mr. Muhammad Aasim	Convener/Assistant Director, NAVTTC

8. ENTRY REQUIREMENTS

Entry requirements of these qualifications are Matric or level 4 or equivalent

9. REGULATIONS FOR THE QUALIFICATION AND SCHEDULE OF UNITS

Not Applicable

10. PACKAGING OF THE QUALIFICATION

The national vocational qualifications are packaged as per the following:

LEVEL-2 (60 Cr) [20:80]

Skilled Worker / junior Lab Attendant:

1. Maintain Occupational Health & Safety and Environment Standards
2. Maintain Tools and Equipment
3. Perform Food Cleaning and Sanitation Process
4. Apply Basic Principles of Food Processing and Preservation
5. Perform Milk Receiving
6. Prepare Bread
7. Prepare Cake

LEVEL-3 (60 Cr) [20:80]

Line Supervisor / Lab Attendant:

1. Adopt Basic Good Manufacturing Practices (GMP) in Food Industry
2. Apply Food Processing Techniques
3. Perform Carbonated Beverage Processing
4. Perform Meat Processing
5. Perform Fruits and Vegetables Processing
6. Perform Processing of Edible Oils And Fats
7. Perform Milling of Grains
8. Perform Butter Making Process
9. Digital Skills

LEVEL-4 (120 Cr) [20:80]Assistant Food Supervisor / Sr. Lab Attendant / Junior Operator / Junior Technician

1. Apply Food Waste Management Techniques
2. Perform Canning Process
3. Perform Pickling Process
4. Ensure Water Treatment in Food Industry
5. Perform Non-Carbonated Beverage Processing
6. Prepare Fermented Dairy products
7. Prepare Non-Fermented Dairy Products
8. Perform Egg Processing and Preservation
9. Perform Sea Food Processing
10. Prepare Snacks
11. Soft Skills

LEVEL-5 (120 Cr) [60:40]Food Supervisor / Lab technician / Operator

1. Use Food Grade packaging Material
2. Perform Food Microbiology Tests
3. Comply Quality Standards
4. Implement Quality Management System
5. Ensure Compliance of Food Safety System
6. Monitor Freezing Process
7. Apply meat curing and smoking
8. Prepare Different Types of Cheese
9. Prepare Sugar
10. Prepare Extruded Products
11. Produce Confections
12. Ensure Quality Control in Food Industry
13. Entrepreneurship Skills

11. SUMMARY OF COMPETENCY STANDARDS

Sr.	Competency Standards	Occupation	Estimated Contact Hours			Total Credit Hours
			Th	Pr	Total	
LEVEL – 2						
1.	Maintain Occupational Health & Safety and Environment Standards	Skilled Worker / Junior Lab Attendant (Food Technology)	20	60	80	8
2.	Maintain Tools and Equipment		10	80	90	9
3.	Perform Food Cleaning and Sanitation Process		20	60	80	8
4.	Apply Basic Principles of Food Processing and Preservation		20	70	90	9
5.	Perform Milk Receiving		20	70	90	9
6.	Prepare Bread		20	70	90	9
7.	Prepare Cake		10	70	80	8
TOTAL			120	480	600	60
LEVEL – 3						
1.	Adopt Basic Good Manufacturing Practices (GMP) in food Industry	Line Supervisor / Lab Attendant	20	40	60	6
2.	Apply Food processing techniques		10	60	70	7

3.	Perform Carbonated Beverage Processing		10	60	70	7
4.	Perform Meat Processing		10	60	70	7
5.	Perform Fruits and Vegetables Processing		10	60	70	7
6.	Perform Processing of edible oils and fats		20	40	60	6
7.	Perform Milling of Grains		10	60	70	7
8.	Perform Butter Making Process		10	50	60	6
9.	Digital Skills		20	50	70	7
TOTAL			120	480	600	60
LEVEL – 4						
1.	Apply food Waste Management Techniques	Assistant Food Supervisor /	10	50	60	6
2.	Perform Canning Process	Sr. Lab Attendant /	20	90	110	11
3.	Perform Pickling Process	Junior Operator /	20	80	100	10
4.	Ensure Water Treatment in food industry	Junior Technician	20	80	100	10
5.	Perform Non-Carbonated Beverage Processing		30	120	150	15
6.	Prepare Fermented Dairy products		30	120	150	15
7.	Prepare Non-Fermented Dairy Products		30	90	120	12

8.	Perform Egg Processing and Preservation		20	80	100	10
9.	Perform Sea Food Processing		20	80	100	10
10.	Prepare snacks		20	90	110	11
11.	Soft Skills		20	80	100	10
TOTAL			240	960	1200	120
LEVEL – 5						
1.	Use Food Grade packaging Material	Food Supervisor / Lab technician / Operator	40	60	100	10
2.	Perform Food Microbiology Tests		30	70	100	10
3.	Comply Quality standards		20	60	80	8
4.	Implement quality management system		30	70	100	10
5.	Ensure Compliance of Food Safety System		30	70	100	10
6.	Monitor Freezing Process		20	60	80	8
7.	Apply meat curing and smoking		30	70	100	10
8.	Prepare Different Types of Cheese		20	80	100	10
9.	Prepare Sugar		20	60	80	8
10.	Prepare Extruded Products		30	50	80	8
11.	Produce Confections		30	70	100	10

12.	Ensure Quality Control in Food Industry		30	50	80	8
13.	Entrepreneurship Skills		30	70	100	10
TOTAL			360	840	1200	120

12. OCCUPATIONS AND LEVEL DESCRIPTOR

Occupations and Level Descriptor					
SR. NO.	OCCUPATIONS	COMPETENCIES STANDARDS	NO OF MODULES	LEVEL	OCCUPATION Credit HOURS
1.	Junior Lab Attendant (Food Technology)	<ul style="list-style-type: none"> • CS-1 • CS-2 • CS-3 • CS-4 • CS-5 	5	2	43
2.	Skilled Worker (Food Technology)	<ul style="list-style-type: none"> • CS-1 • CS-2 • CS-3 • CS-4 • CS-5 • CS-6 • CS-7 	7	2	60
3.	Lab Attendant / Line Supervisor (Carbonated Beverage Processing)	<ul style="list-style-type: none"> • CS-8 • CS-9 • CS-10 	3	3	20
4.	Lab Attendant / Line Supervisor (Meat Processing)	<ul style="list-style-type: none"> • CS-8 	3	3	20

		<ul style="list-style-type: none"> • CS-9 • CS-11 			
5.	Lab Attendant / Line Supervisor (Fruits & Vegetables Processing)	<ul style="list-style-type: none"> • CS-8 • CS-9 • CS-12 	3	3	20
6.	Lab Attendant / Line Supervisor (Edible Oils & Fats)	<ul style="list-style-type: none"> • CS-8 • CS-9 • CS-13 	3	3	19
7.	Lab Attendant / Line Supervisor (Cereals & Grains Milling)	<ul style="list-style-type: none"> • CS-8 • CS-9 • CS-14 	3	3	20
8.	Lab Attendant / Line Supervisor (Butter making)	<ul style="list-style-type: none"> • CS-8 • CS-9 • CS-15 	3	3	19
9.	Assistant Food Supervisor / Senior Lab Attendant / Junior Technician / Junior Operator (Canning Process)	<ul style="list-style-type: none"> • CS-16 • CS-19 • CS-17 	3	4	27
10.	Assistant Food Supervisor / Senior Lab Attendant / Junior Technician / Junior Operator (Pickling Process)	<ul style="list-style-type: none"> • CS-16 • CS-19 • CS-18 	3	4	26

11.	Assistant Food Supervisor / Senior Lab Attendant / Junior Technician / Junior Operator (Non-carbonated Beverage Processing)	<ul style="list-style-type: none"> • CS-16 • CS-19 • CS-20 	3	4	31
12.	Assistant Food Supervisor / Senior Lab Attendant / Junior Technician / Junior Operator (Dairy Technology)	<ul style="list-style-type: none"> • CS-16 • CS-19 • CS-21 • CS-22 	4	4	43
13.	Assistant Food Supervisor / Senior Lab Attendant / Junior Technician / Junior Operator (Egg processing & Preservation)	<ul style="list-style-type: none"> • CS-16 • CS-19 • CS-23 	3	4	26
14.	Assistant Food Supervisor / Senior Lab Attendant / Junior Technician / Junior Operator (Seafood Processing)	<ul style="list-style-type: none"> • CS-16 • CS-19 • CS-24 	3	4	26
15.	Assistant Food Supervisor / Senior Lab Attendant / Junior Technician / Junior Operator (Snacks Processing)	<ul style="list-style-type: none"> • CS-16 • CS-19 • CS-25 	3	4	27
16.	Food Supervisor / Lab Technician / Operator (Food Technology)	<ul style="list-style-type: none"> • CS-26 • CS-27 • CS-28 • CS-29 	7	5	64

		<ul style="list-style-type: none"> • CS-30 • CS-31 • CS-37 			
17.	Food Supervisor / Lab Technician / Operator (Meat Processing)	<ul style="list-style-type: none"> • CS-26 • CS-27 • CS-28 • CS-29 • CS-30 • CS-31 • CS-37 • CS-32 	8	5	74
18.	Food Supervisor / Lab Technician / Operator (Cheese making)	<ul style="list-style-type: none"> • CS-26 • CS-27 • CS-28 • CS-29 • CS-30 • CS-31 • CS-37 • CS-33 	8	5	74
19.	Food Supervisor / Lab Technician / Operator (Sugar Processing)	<ul style="list-style-type: none"> • CS-26 • CS-27 • CS-28 	7	5	64

		<ul style="list-style-type: none"> • CS-29 • CS-30 • CS-37 • CS-34 			
20.	Food Supervisor / Lab Technician / Operator (Extruded Products Processing)	<ul style="list-style-type: none"> • CS-26 • CS-27 • CS-28 • CS-29 • CS-30 • CS-37 • CS-35 	7	5	64
21.	Food Supervisor / Lab Technician / Operator (Confectionary Products)	<ul style="list-style-type: none"> • CS-26 • CS-27 • CS-28 • CS-29 • CS-30 • CS-31 • CS-37 • CS-36 	8	5	74

A. TECHNICAL COMPETENCIES

CS-1: Maintain Occupational Health & Safety and Environment standards

Overview

This Competency Standard covers the competencies required to protect/apply personal health and safety at the workplace according to the industry's approved guidelines, procedures, and interpret rules/regulations. The trainee will be expected to identify and use Personal Protective Equipment (PPE) according to the workplace requirements. The underpinning knowledge regarding personal safety will be sufficient to provide the basis for the job at the workplace.

Competency Unit	Performance Criteria
CU1. Apply occupational health and safety measures (OHS)	<p>P1: Perform Work safely at all times, complying with health and safety precautions and other regulations related to the food processing & packaging industry.</p> <p>P2: Identify personal safety hazards in the workplace, so that the potential for personal injury, damage to equipment or the workplace is prevented, and corrective action is taken</p> <p>P3: Deal with problems which are within your control, and report those that cannot be resolved to the safety officer</p> <p>P4: Keep work area clean and clear of obstructions and storing tools or equipment as per the procedure of industry to overcome any incident</p> <p>P5: Remove personal articles (jewelry, watch, cell phone, etc.) before entering the work area.</p> <p>P6: Wear Personal Protective Equipment (PPE) as per the job</p>
CU2. Contribute to continuous	P1: Interpret work processes and procedures correctly to

improvement in OHS practice Identify Hazards at Workplace	<p>identify the risk of hazards at the workplace</p> <p>P2: Recognize engineering processes, tools, equipment and consumable materials that have the potential to cause harm</p> <p>P3: Identify any potential hazards and take appropriate action to minimize the risk</p>
CU3. Dispose of hazardous waste/materials	<p>P1: Identify hazardous waste/ drug materials need to be disposed off</p> <p>P2: Collect hazardous or non-hazardous waste carefully from the designated area as per the approved procedure</p> <p>P3: Use proper disposal hazardous containers for dispose-off hazardous waste as per the procedure</p> <p>P4: Take necessary precautions like PPEs while dispose-off hazardous waste/ materials as per the standard operating procedure</p>
CU4. Interpret personal safety rules & regulations related to the manufacturing industry	<p>P1: Keep work area ready for inspection as per Standard Operating Procedures of the food industry</p> <p>P2: Follow CGMP and Standard Operating Procedures to maintain a clean work environment that complies with regulatory requirements</p>
CU5. Follow safe work procedures relating to own work	<p>P1: Follow the industry's occupational safety rules/regulations and Current Good Manufacturing Practices (CGMPs)</p> <p>P2: Deal with problems which are within your control, and report those that cannot be resolved to the safety officer</p> <p>P3: Keep work area clean and clear of obstructions, and storing tools or equipment as per the procedure of industry to overcome any incident</p> <p>P4: Use personal protective equipment (PPEs)</p> <p>P5: Perform LOTO-TO(lockout tag out –try out</p>

CU6. Maintain First-aid Box	P1: Ensure availability of first aid box P2: Check first aid box for requisite emergency medicines P3: Check the expiry of medicines P4: Perform first aid treatment against electric shocks P5: Perform first aid treatment/bandages against minor injuries
CU7. Maintain Fire Extinguisher	P1: Check fire extinguisher P2: Operate fire extinguisher P3: Replace fire extinguisher
CU8. Follow Environmental, Health and Safety standards	P1: Follow Health and Safety Rules P2: Ensure environmental safety P3: Ensure compliance of metrology effects P4: Ensure workplace safety by following safety standards of the food industry P5: Ensure safety while food processing and packaging P6: Store all tools and equipment properly in a safe area P7: Follow the emergency response plan

Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- Explain Good Manufacturing Practices concerning the food processing industry
- Explain safety rules and regulations of the food industry
- Enlist safety equipment in the manufacturing area
- Interpret safety signs and symbols
- Describe safety-related Standard Operating Procedure/guidelines
- Explain disposal techniques related to waste
- Explain Waste disposal SOPs
- Define the use of putting masks and gloves, while disposing of hazardous waste/materials
- Describe risks associated with each operation

- Explain workplace-specific guidelines for uniform
- Explain Current Good Manufacturing Procedures (CGMP) relating to a clean work environment
- Explain industry Standing Operating Procedures (SOPs) relating to a safe work environment
- Explain lifesaving rules
- Describe all types of work permits

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

- Health and safety precautions
- Types of hazards that are most likely to cause harm to health and safety
- Health and safety signs and symbols
- Techniques and methods to identify the risks of hazards at the workplace
- Dealing with hazards to avoid any accident or injury
- Safety reporting procedures and documentation
- Use of Personal Protective Equipment (PPE)
- Safe methods of handling heavy loads
- Identify possible hazards at the workplace
- Use correct Personal Protective Equipment (PPE) for the assigned job

Tools and Equipment required

The tools and equipment required for this competency standard are given below:

Sr. No.	Items
1.	Personal Protective Equipment (safety shoes, gloves, goggles, helmet & earplug, etc.)
2.	Health and Safety Manual

3.	Maintenance box
4.	Safety-Critical Devices (Fire Extinguishers, Smoke Detectors, Fire Hydrants, Self-Containing Breathing Apparatus (SCBA))
5.	First Aid Box
6.	Air Vents
7.	Safety Siren

CS-2: Maintain Tools and Equipment**Overview**

This Competency Standard identifies the competencies required to apply skills and knowledge to perform processing functions following the industry's approved guidelines and procedures. The trainee will be expected to identify food processing machinery and perform machines/equipment adjustment for a quality product as well as general housekeeping and maintenance of equipment before and after processing activities.

Competency Unit	Performance Criteria
CU1. Perform cleaning of tools and equipment	<p>P1: Check the cleanliness status of the machine after completion of each batch as per the instructions given in manual</p> <p>P2: Take corrective measures in case of inappropriate cleaning</p> <p>P3: Maintain record-keeping</p>
CU2. Apply food-grade lubricants of tools/equipment	<p>P1: Check gauge of food lubricants as per machine manual</p> <p>P2: Ensure proper food lubrication of machinery as per schedule</p>
CU3. Implement Internal Control Plan (ICP) for tools and equipment	<p>P1: Inspect the tools/equipment regularly</p> <p>P2: Identify damaged tools/equipment</p> <p>P3: Perform repair/replace tools/parts</p> <p>P4: Perform calibration as per the defined frequency</p> <p>P5: Maintain all record of tools/equipment as per industry SOPs</p>
CU4. Adopt housekeeping practices for tools/equipment (e.g. 5 S)	<p>P1: Identify and eliminate all unnecessary items from the workplace (Sort)</p> <p>P2: Put every necessary item in good order and focused on efficient and effective storage methods (Systemize)</p>

	<p>P3: Inspect the workplace and equipment for defects (Sweep)</p> <p>P4: Keep the workplace organized, orderly and clean (Standardize)</p> <p>P5: Ensure to follow the 5'S standards (Self-Discipline)</p>
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Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- Explain machine electric input and output system
- Understand the instructional manual of the machine
- Define machine PLC/HMI and how it works.
- Describe the Importance of food-grade lubrication for the smooth functioning of the machine
- Define machine gauge
- Explain the procedure of maintaining and filling up of log-book properly
- Describe the types and functions of the machine
- Explain different parts of the machine
- Describe the process of machine operation
- Explain the process for maintaining the tools and equipment

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

- Describe types of machine
- Describe critical parts of the machine
- Preventive and corrective measures for tools and equipment
- Describe the importance of food-grade lubrication

Tools and Equipment required

The tools and equipment required for this competency standard are given below:

Sr. No.	Items
1.	Tool kit
2.	Grease gun
3.	Drill Machine, grinder
4.	Pressure guns for oiling
5.	Hand jacks
6.	Volt and ampere meters
7.	PPE's, chemical suit, safety helmet,

CS-3: Perform Food Cleaning and Sanitation Process**Overview**

This Competency Standard covers the competencies required to apply skills and specific knowledge to perform cleaning and sanitation following the industry's approved guidelines and procedures. The trainee will be able to prepare a log sheet as per the requirements of the manufacturing order as well as industry requirements.

Competency Unit	Performance Criteria
CU1. Ensure availability of all cleaning and sanitation materials	P1: Verify cleaning and sanitation materials as per requirement P2: Check quality parameters of cleaning chemicals (pH, Purity, Reactivity, Conductivity)
CU2. Ensure all utilities are available	P1: Check the availability of potable water for cleaning P2: Check the availability of heating source P3: Check the availability of compressed air
CU3. Perform cleaning and sanitation as per schedule/procedure	P1: Select the appropriate method of cleaning as per product nature (dry and wet cleaning) P2: Use of color-coded cleaning tools for food and non-food surfaces P3: Apply 6Ts (Time, Temperature, Titration, Turbulence, Technology, Training) of cleaning P4: Perform disinfection of food contact surfaces where required P5: Validate the cleaning method as per requirement
CU4. Verify cleaning and sanitation by analytical/swab test/ATP-testing	P1: Perform visual verification of the surface after cleaning P2: Analyze the pH of initial and final rinsing water P3: Ensure all analytical/Swab/ATP results are as per standards
CU5. Prepare log sheets as per the procedure	P1: Maintain a record of all 6Ts P2: Maintain records of all lab results

CU6. Control cleaning solution temperature to melt fats/meats	<p>P1: Ensure the water temperature & pressure during the cleaning process</p> <p>P2: Ensure cleaning solution temperature as per the specification of food processing to remove product debris</p>
CU7. Ensure equipment free of visible soil, haze or water beads	<p>P1: Ensure cleaning of stainless steel (SS) equipment with acid regularly</p> <p>P2: Ensure the filtration of cleaning solutions and water before cleaning</p>
CU8. Sanitize inaccessible parts of machinery before assembling	<p>P1: Ensure cleaning of hard to reach parts by dismantling</p> <p>P2: Ensure cleaning out place(COP) of equipment/Machinery as per SOP</p>
CU9. Ensure pre-operation Inspection	<p>P1: Monitor workplace by sight, feel, hearing and smell regularly</p> <p>P2: Use flashlights and other lights to see non-visible parts of machinery before start operation</p> <p>P3: Ensure equipment free of visible soil, haze or water beads</p> <p>P4: Inspect visible parts and inaccessible parts of machinery after assembling</p> <p>P5: Inspect that equipment is free of chemicals, tools and cleaning supplies</p> <p>P6: Inspect that guard are in place before starting equipment</p> <p>P7: Complete formal pre-operation inspection according to plant Sanitation Standing Operating Procedures (SSOP)</p>

Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- Define cleaning and sanitation.
- Explain different cleaning techniques like dry cleaning, wet cleaning, cleaning in place, cleaning out of place, etc.
- Describe principles underlying sanitation/ cleaning operations.
- Know the suitability of cleaning operation in a certain machine, equipment, and food.
- Describe different types of sanitizers used in food processing units.
- Describe different sanitizing tools used in food processing plants.
- Interpret the purity and concentration of various cleaning agents.
- Interpret gauges of utilities (Hot water, steam, compressed air).
- Describe the parameters of water, steam, and compressed air.
- Define the TDS and pH of water.
- Know pathogens (Coliforms, E. Coli, and Total Plate Count).
- Define the swab test.
- Define 6T's (Time, Temperature, Turbulence and Titration, Technology, Training)
- Define acid and base.
- Define pasteurization and sterilization.
- Interpret the time-temperature relationship for the killing of microflora.
- Know the scaling of pipelines or surfaces and their remedy.
- Describe temperatures of different cleaning agents to be effective for the sanitation process.

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

- Demonstrate Sanitizers
- Demonstrate Sanitizing tools
- Perform 6T's
- Perform Cleaning processes

Tools and Equipment required

The tools and equipment required for this competency standard are given below:

Sr. No.	Items
1.	Cleaning trolleys
2.	Cleaning hose pips, shower guns
3.	Conductivity meters, level switches, flow meters
4.	PPE's (Goggles, face shield, comical suite, chemical gloves)
5.	Disinfection liquid,
6.	Pumps, Air Blowers
7.	Brushes, scrapers, sponge, Vacuum Pump

CS-4: Apply Basic Principles of Food Processing and Preservation**Overview**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of food processing and preservation. It provides an introduction to the main theories and activities associated with food processing and preservation techniques being applied in the food industry.

Competency Unit	Performance Criteria
CU1. Examine the characteristics of raw food	<p>P1: Identify the elements of the raw food</p> <p>P2: Evaluate the components of the food product</p> <p>P3: Identify the source and variability of raw food material</p> <p>P4: Analyze the impact on food processing operations</p>
CU2. Apply different food processing technologies	<p>P1: Assess the unit operations required to produce a given food product</p> <p>P2: Apply the principles and current practices of processing techniques</p> <p>P3: Enlist the preparatory operations performed during food processing</p> <p>P4: Check the effects of processing parameters on product quality</p> <p>P5: Apply the basic principles and practices of cleaning and sanitation in food processing operations</p>
CU3. Apply alternative existing technologies for food preservation	<p>P1: Establish the need for different preservation techniques</p> <p>P2: Develop a process chart for the implementation of irradiation or high-pressure preservation</p> <p>P3: Assess the physical, biochemical and microbiological changes to a food product preservation treatment</p> <p>P4: Review the effectiveness and consumer acceptance of preservation technologies</p>

	P5: Differentiate the types of hazards (biological, physical and chemical) and the critical limits
CU4. Categorize Food Packaging	P1: Enlist important characteristics of a package P2: Enlist types of packaging materials for food preservation P3: Enlist the information considered mandatory to appear on the label of prepared food.

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Elements of the food processing techniques
- Implementation of different preservation strategies in the food industry
- Knowledge of food packaging and types of packaging material

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Enlist the food processing technologies
- Enlist the food presentation ways

Tools & Equipment required:

Sr. No.	Items
1.	Washer
2.	Peeler
3.	Blancher
4.	Slicer
5.	Pasteurizer
6.	Homogenizer

7.	Mixture
8.	Grinder
9.	Dryer
10.	Evaporator
11.	Fryer
12.	Carbo cooler
13.	Filler
14.	Concentrator
15.	Metal detector
16.	Boiler
17.	Sifter
18.	Husker
19.	Polisher
20.	Length grader
21.	Color sortex
22.	Paddy separator
23.	Metal detector
24.	Labeller
25.	Palletizer
26.	Vacuum packing machine
27.	Bags
28.	Bins
29.	Tanks
30.	Boxes
31.	Silos
32.	Vessels
33.	Vats
34.	Cold storage room
35.	Bags

CS-5: Perform Milk Receiving**Overview**

This competency standard covers the skills and knowledge required to handle raw milk and perform milk analysis. The trainees will be able to enhance milk handling skills.

Competency units	Performance criteria
CU1. Inspect milk vehicle	P1: Inspect milk vehicle P2: Record milk temperature P3: Perform Cleaning-in-place (CIP) of milk vehicle
CU2. Perform milk analysis	P1: Perform milk sampling P2: Perform sensory evaluation P3: Perform milk analysis (Fat, SNF, pH, COB and APT tests) P4: Perform adulteration tests
CU3. Maintain records	P1: Maintain log book P2: Record milk test results in a standard format P3: Record chemicals and equipment in milk reception lab

Understanding and Knowledge

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- Significance of quality of raw milk
- Sampling of milk
- Quantitative and qualitative analysis of raw milk
- Adulteration tests to be performed of raw milk
- significance and methods of monitoring

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Perform sampling of milk
- Determine fat % of milk
- Determine LR of milk

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Lactometer
2	pH meter
3	Gerber machine

CS-6: Prepare Bread**Overview:**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of Baking. This unit covers the competencies required to prepare for work, make bread and carry out finishing work. It provides an introduction to the main practical and activities associated with baking Technology being applied in the food industry.

Competency Units	Performance Criteria
CU1. Prepare for work	<p>P1: Select and use workplace dress according to job requirement</p> <p>P2: Identify and select the tools, equipment and materials as per the job requirement.</p> <p>P3: Pre-heat the oven to the required temperature as per the job requirement.</p>
CU2. Make bread/rusk/burger bun	<p>P1: Receive ingredients as per specifications</p> <p>P2: Weigh/measure the ingredients according to recipe.</p> <p>P3: Mix the ingredients to make dough</p> <p>P4: Bulk ferment the dough to the required size.</p> <p>P5: Operate dough moulder</p> <p>P6: Set temperature and humidity of proofer</p> <p>P7: Operate oven to bake the bread/rusk/burger bun</p> <p>P8: De-pan and cool the baked products to normal temperature</p>
CU3. Perform packaging and labeling	<p>P1: Slice the bread/rusk/burger bun</p> <p>P2: Pack and label bread/rusk/burger bun as per specifications</p> <p>P3: Store the product as per the product requirement.</p>

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Describe Mixing methods
- Knowledge of Proofing cabins
- Knowledge on Ingredients

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Perform mixing of ingredients
- Perform moulding, proofing and baking
- Operate packing and coding machine

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Measuring scale
2	Dough Mixer machine
3	Dough Sheeter
4	Proofing cabinet
5	Oven

CS-7: Prepare Cake**Overview**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of Baking. This unit covers the competencies required to prepare for work, make cake and carry out finishing work. It provides an introduction to the main practical and activities associated with cake making.

Competency Units	Performance Criteria
CU1. Prepare for work	<p>P1: Select and use workplace dress according to job requirement</p> <p>P2: Identify and select the tools, equipment and materials as per the job requirement.</p> <p>P3: Pre-heat the oven to the required temperature as per the job requirement.</p>
CU2. Make different cake types (muffins, sponge cake, pound cake, layer cake, cup cake etc.)	<p>P1: Receive ingredients as per specifications</p> <p>P2: Weigh/measure the ingredients according to recipe.</p> <p>P3: Mix the ingredients according to the methods to make batter as per the required consistencies and standard recipe.</p> <p>P4: Pour the batter into baking dish as per the required shape</p> <p>P5: Bake the batter at the required temperature and time.</p> <p>P6: Remove the cake from the oven and cool the cake following safety procedure.</p> <p>P7: De-pan and cool the baked products to normal temperature</p>
CU3. Perform packaging and labeling	<p>P1: Slice the cake</p> <p>P2: Pack and label cake</p> <p>P3: Store the product as per the product requirement.</p>

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Different types of cakes
- Describe Mixing methods
- Knowledge on Ingredients

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Measure and mix the ingredients as per the standard recipe
- Operate oven to maintain temperature and time

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Balance
2	Batter Mixer
3	Filling machine
4	Packing machine
5	Oven

CS-8: Adopt Basic Good Manufacturing Practices (GMP) for Food Industry**Overview**

This Competency Standard identifies the competencies for GMP guidelines commonly used to implement, manage, and improve quality standard programs in food processing. The trainees will understand GMP systems in different food operations, including procedures and documentation for product safety, hygienic product manufacture and handling, packaging, and labeling within specifications, as well as proper documentation and record-keeping. It will further cover GMP guidelines for premises and equipment and preventive and corrective actions for customer's complaints and product recall.

Competency Unit	Performance Criteria
CU1. Apply basic GMP requirements regarding the layout of premises, workspace	<p>P1: Permit adequate cleaning and/or disinfection</p> <p>P2: Protect against the accumulation of dirt, toxic materials, food debris and the formation of condensation</p> <p>P3: Aware of layout and construction of the food premises as per Food hygiene legislation</p> <p>P4: Maintain sufficient space for food production and storage of equipment</p> <p>P5: Adequate mechanical ventilation to effectively remove fumes, smoke, steams, and vapors from food premises</p> <p>P6: Follow safety rules and regulations for the food processing industry</p>
CU2. Apply Basic GMP requirements regarding personal hygiene	<p>P1: Perform proper handwashing and disinfection procedures before entering production</p> <p>P2: Report to the supervisor in the case of illness</p> <p>P3: Wear Personal Protective Equipment (PPE) as per SOPs regarding hygienic measures</p>
CU3. Apply basic GMP requirements regarding	<p>P1: Make sure that the actual food rework is identifiable.</p> <p>P2: Perform rework handling as per industry standards.</p>

food processing, including rework	P3: Maintain traceability records of all food rework
CU4. Apply basic GMP requirements regarding food packaging	<p>P1: Prevent contamination in manufacturing, storage, and transportation</p> <p>P2: Ensure food contact materials and products are safe for their intended uses</p> <p>P3: Maintain packing surfaces and equipment to minimize product damage and contamination</p>
CU5. Apply basic GMP requirements regarding documentation and records	<p>P1: Fill out specifications, records, batch production records for production under the supervision</p> <p>P2: Interpret laboratory control records</p> <p>P3: Maintain records to support that any Good manufacturing practices (GMP) have been implemented</p> <p>P4: Locate documents of external origin, if needed</p> <p>P5: Safeguard documents and records appropriately</p>
CU6. Apply basic GMP requirements to production quality control and in-process controls	<p>P1: Follow master production instructions (SOPs)</p> <p>P2: Perform basic in-process control measurements (e.g. pH, weighing) under supervision</p> <p>P3: Perform basic quality control measure under supervision</p>
CU7. Apply basic GMP requirements regarding storage, warehousing, and distribution	<p>P1: Store materials and end product appropriately</p> <p>P2: Follow First Expire First Out (FEFO)/First In First Out (FIFO)</p> <p>P3: Ensure the stacking method as per product description</p> <p>P4: Ensure Product storage as per required parameters (temperature, humidity, etc.)</p>
CU8. Apply basic GMP requirements regarding the management of purchased materials	<p>P1: Handle the raw materials as per product requirements</p> <p>P2: Meet manufacturing order specifications, and regulatory requirements</p> <p>P3: Select the appropriate raw materials based on functionality</p>

	<p>P4: List existing approved materials and their specifications</p> <p>P5: Meet company or customer standards (e.g. halal, organic, gluten-free)</p>
CU9. Apply basic GMP requirements regarding cleaning and sanitation	<p>P1: Ensure safe food supply</p> <p>P2: Follow sanitation procedures for all food contact equipment and food contact surfaces</p> <p>P3: Report sanitation failures</p> <p>P4: Maintain record-keeping associated with the sanitation procedure</p>
CU10. Apply basic GMP requirements regarding measures for prevention of cross-contamination	<p>P1: Ensure segregation of area according to hygiene requirement (Zoning)</p> <p>P2: Control equipment to minimize odors and vapors (including steam and noxious fumes) in areas where they may contaminate food</p> <p>P3: Ensure adequate floor drainage systems in all areas</p>
CU11. Apply basic GMP requirements regarding Integrated Pest Management (IPM)	<p>P1: Identify Target pest related to workplace area</p> <p>P2: Ensure preventive measures regarding pest entry in the food processing area</p> <p>P3: Install monitoring devices (Insect-o-curators, Bait Station, Glue Boards, Straws, Cages)</p> <p>P4: Clean and maintain monitoring devices</p> <p>P5: Maintain record and trend analysis</p>
CU12. Apply basic GMP requirements regarding food defense	<p>P1: Prevent intentional contamination of food products (Human intervention as the source of contamination)</p> <p>P2: Prevent accidental (unintentional) contamination of food products</p> <p>P3: Minimize the risk and impact of an incident of intentional contamination</p>

Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- Explain the importance of layout in the food industry?
- Why personal hygiene is important in the food industry?
- Define the rework handling procedure?
- Define FEFO and FIFO and its importance?
- Differentiate between cleaning and sanitation?
- What is zoning?
- How to establish a food defense system?
- Describe the importance of pest management in the food industry

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

- Demonstrate FEFO/FIFO
- Interpret Zoning
- Perform Cleaning and sanitation
- Use of Monitoring devices for pest management

Tools and Equipment required

The tools and equipment required for this competency standard are given below:

Sr. No.	Items
1.	PPE's
2.	Disinfectors, sanitizer
3.	Insect-o-curators, Bait Station, Glue Boards & Straws, Cages
4.	Hose cleaning pipe, scrubbers, mopes, color-coded brushes,
5.	Tempered glass, Glass protective lights
6.	Trolleys

CS-9: Apply Food Processing Techniques**Overview**

This competency standard covers the skills and knowledge required to apply various food processing techniques. The trainees will be able to understand techniques in food processing.

Competency Unit	Performance Criteria
CU1. Prepare food for processing	P1. Perform sorting, grading and peeling methods for fruits and vegetables P2. Ensure dressing of Meat, Poultry and Marine food P3. Perform shelling of eggs and dry fruits P4. Ensure batch loading as per recipe
CU2. Apply size reduction techniques	P1. Perform cutting of fruits and vegetables by using different methods P2. Perform cutting, mincing, filleting of Meat and Fish P3. Perform grinding and milling
CU3. Apply extraction techniques	P1. Perform extraction techniques in fruits and vegetables P2. Perform extraction techniques in Fat and Oil
CU4. Apply high temperature techniques	P1. Perform pasteurization of different food products P2. Perform sterilization of different food products P3. Perform (UHT) Ultra High Temperature treatment for liquid foods P4. Perform blanching of Fruits and vegetables P5. Use dry heat method for different foods
CU5. Apply low temperature techniques	P1. Use refrigeration/cold storage methods for different foods P2. Use different freezing techniques for foods P3. Use different chilling techniques for foods
CU6. Apply fermentation techniques	P1. Perform lactic acid fermentation for foods P2. Perform Acetic Acid fermentation for foods

	P3. Perform Alcoholic fermentation for foods
CU7. Apply evaporation techniques	P1. Use different evaporation techniques P2. Use spray drying method for liquid foods P3. Perform drum drying for foods
CU8. Monitor adding of ingredients	P1. Check flavor, aroma and appearance of ingredients P2. Ensure addition of ingredients as per specification P3. Maintain record of ingredients
CU9. Push batches to preservation and for packaging process	P1. Perform incubation / Maturation for different food P2. Ensure storage of finished products at low temperature P3. Perform Hardening of frozen products
CU10. Produce beverages	P1. Prepare carbonated drink as per recipe P2. Prepare non-carbonated drink as per recipe
CU11. Handle food additives	P1. Use different preservative chemicals for food preservation P2. Perform enrichment and fortification P3. Use functional additives to improve physical and chemicals properties
CU12. Perform basic calculation	P1. Perform dry and wet calculation for ingredients P2. Calculate process losses

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- Food processing
- Food transformation
- Grinding grain
- Raw flour making
- Cooking
- Convenience foods making
- Overnutrition
- Primary food processing

- Secondary food processing
- Tertiary food processing

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Understand food processing
- Understand primary food processing
- Understand secondary food processing
- Understand tertiary food processing

Tools & Equipment required:

Sr. No.	Items
1.	Grinder
2.	Stove
3.	Cooking Pan

CS-10: Perform Carbonated Beverage Processing**Overview**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of carbonated beverage processing. It provides an introduction to the main theories and activities associated with beverage processing being applied in the food industry.

Competency Units	Performance Criteria
CU1. Apply standard formulation procedure	P1: Ensure availability of all ingredients as per formulation P2: Ensure formulation contains permitted ingredients P3: Tag each food ingredients appropriately P4: Check the working of weighing balance and its calibration.
CU2. Apply mixing process	P1: Check the working of mixing tank /agitator P2: Check availability of all utilities P3: Check the cleaning of all equipment used P4: Check strainers and line filters are in sound condition.
CU3. Ensure Pasteurization and homogenization of for carbonated drinks	P1: Check availability of steam for pasteurization P2: Make sure pasteurizer temp gauge is in working condition and calibrated. P3: Ensure there is no leakage from the pasteurizer P4: Ensure homogenizer is in good working condition P5: Check the sample before and after homogenization
CU4. Ensure carbonation and cooling of carbonated drinks	P1: Check quality of CO2 gas as per specifications P2: Check the working of carbo cooler condenser and temperature gauges P3: Check any leakage from carbo cooler and all pipeline at inlet and outlet P4: Check CO2 gas volume in the final product after certain intervals as per sampling plan

	P5: Check sealing of container
CU5. Filling of beverages	P1: Ensure quality of packaging material P2: Ensure all filters and strainers are in place before starting beverage filling. P3: Ensure product meet the quality parameters as per standard specifications P4: Ensure properly filling and sealing of capping machines P5: Check the working of the label and date coding printer

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Beverage equipment
- Dates coding machine operation
- Pasteurization time and temp.
- Enlist the impurities in CO₂ gas
- Describe the carbo cooler principle and carbonation process

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Perform mixing, pasteurization and carbonation of beverage

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Mixing tank
2	Pasteurizer, carbo cooler
3	Filler and capper

4	pH meter
5	Refractometer
6	CO ₂ tester

CS-11: Perform Meat Processing**Overview**

This competency unit covers the skills and required knowledge to demonstrate the understanding of meat processing techniques

Competency Units	Performance Criteria
CU1. Inspect the live animals	P1: Check the animals/bird health P2: Calculate the mortality rate in case of poultry P3: Calculate the average weight and size of the animal/bird
CU2. Perform Halal Slaughtering	P1: Apply the basic shariah principles P2: Give horizontal cut to the esophagus, carotid artery, jugular vein and trachea simultaneously P3: Allow animals/birds to bleed completely
CU3. Grading and chilling of carcass	P1: Grade the carcasses as per weight, age and size specifications P2: Monitor chilling process as per specifications P3: Record the temperature of chilled carcass P4: Separate the out-of-specifications product P5: Rectify the process as per procedures
CU4. Cutting and/or mincing of meat	P1: Perform cutting/mincing as per product specifications P2: Identify the out-of-specifications product P3: Dispose waste generated by the process as required
CU5. Packaging and labeling of meat	P1: Inspect the packaging material to meet the specifications P2: Monitor the packaging of products as per label specifications P3: Check the temperature of finally packed products
CU6. Freezing, and storage of meat	P1: Check the blast freezer is working as per specifications P2: Monitor the freezing procedure is being followed as per specifications

	<p>P3: Check the cold storage is working at specified temperatures</p> <p>P4: Shift the final freeze products in cold store</p>
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Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Type, composition and nutritional value of meat
- Pre-mortem inspection of live animals
- Requirements of Halal slaughtering
- Grading and chilling procedures
- Meat cuts and cutting equipment
- Labeling laws and specifications
- Packaging materials nature and specifications
- Freezing procedures and defects
- Cold storage working and protocols
- Meat spoilage and control

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Perform meat cutting and grading
- Perform meat packaging & storage

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Knives
2	Cutters
3	Cutting boards

4	Chopper
5	Mincer
6	Trolleys
7	Crates
8	Chiller and cold store
9	Packing machine

CS-12: Perform Fruits and Vegetables Processing**Overview**

This competency standard covers the skills and knowledge required to perform value addition in fruits and vegetables. The trainees will be able to enhance skills for value addition in fruits and vegetables like the production of jams, jellies, marmalades, etc.

Competency units	Performance criteria
CU1. Receive fruits and vegetables according to quality parameters	P1: Inspect fruits and vegetables as per food safety requirements (Pest contamination, cuts, appearance etc.) P2: Perform sorting, sizing and grading to meet specifications.
CU2. Perform Cleaning of Fruits and Vegetables	P1: Perform washing and cleaning. P2: Operate conveyers used to transfer materials to required locations. P3: Maintain work area and equipment to meet housekeeping standards
CU3. Perform preparatory operations	P1: Perform blanching as per set specifications. P2: Operate peeler. P3: Operate destoner. P4: Perform Cutting, Slicing, Dicing, Shredding, Pulping, Crushing etc. P5: Perform Mixing according to product requirements
CU4. Prepare value-added products from fruits	P1: Prepare batch according to set specifications by mixing fruits and additives. P2: Perform Syruping for fruits. P3: Check quality parameters (Brix, viscosity, acidity, sensory evaluation)
CU5. Prepare value-added products	P1: Prepare batch according to set specifications by mixing vegetables and additives.

from vegetables	P2: Perform brining for vegetables P3: Check quality parameters (Brix, viscosity, acidity, sensory evaluation)
CU6. Perform Drying Process	P1: Check control points to confirm performance is maintained within specification P2: Operate dryer for fruit products P3: Perform routine analysis to check the quality of the final product
CU7. Perform Freezing process	P1: Check control points to confirm performance is maintained within specification P2: Monitor equipment to confirm operating condition P3: Identify out-of-specification product, process and equipment performance

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- materials specifications and quality requirements
- methods used to convey materials. This includes purpose and basic principles of conveying equipment and systems
- methods used to clean materials. This includes both wet and dry-cleaning methods and reasons for selection
- consequences of inadequate cleaning of raw material
- typical types of non-conformance for materials handled
- sizing and grading criteria and procedure
- quality characteristics of the fermented and pickled product
- microbiological considerations in drying
- basic operating principles of process control

- significance and method of monitoring control points within the process
- common causes of variation and corrective action required during mentioned processes
- waste handling requirements and procedures
- recording requirements and procedures

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Prepare value added product from fruits and/or vegetables
- Determine Brix, Acidity, viscosity.
- Perform blanching
- Prepare mango lathers
- Check temperature of cold storage

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Cutting boards
2	Choppers
3	Knives
4	Pans
5	Peelers
6	Juicer
7	Slicer
8	Blenders
9	Crusher
10	Boiler

11	Stoves
12	Refractometer
13	pH meter
14	Freezer
15	Dryer

CS-13: Perform Processing Of Edible Oils And Fats**Overview:**

This competency standard covers the skills and knowledge required to perform the processing of edible oils and fats through the neutralization process, bleaching process, deodorizing, hydrogenation, interesterification, and packaging of the finished product. The trainees will be able to enhance various edible oils and fats products production skills.

Competency units	Performance criterion
CU1. Perform load and unload tankers	<p>P1: Prepare the tanker loading/unloading process</p> <p>P2: Ensure the tanker loading/ unloading process is set-up according to company procedures</p> <p>P3: Perform tanker loading/ unloading process</p> <p>P4: Monitor Control points to confirm that performance is maintained within specification</p> <p>P5: Identify out-of-specification product, process and equipment performance</p> <p>P6: Shut down tanker loading/unloading process</p> <p>P7: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P8: Record workplace information in the appropriate format</p>
CU2. Perform Fats and oil analysis	<p>P1: Perform representative sampling for raw and processed oil for analysis</p> <p>P2: Prepare all required reagents and solutions for analysis</p> <p>P3: Perform all Physico-chemical analysis of oils and fats</p> <p>P4: Maintain stock and record of all required chemicals and reagents</p>
CU3. Perform neutralization process	<p>P1: Prepare neutralization process for operation</p> <p>P2: Ensure the availability of materials to meet production requirements</p> <p>P3: Check equipment to confirm readiness for use</p>

	<p>P4: Set the neutralisation process to achieve production requirements</p> <p>P5: Perform neutralization process</p> <p>P6: Monitor control points to confirm that performance is maintained within specification</p> <p>P7: Check neutralized product meets FFA and soap target specifications</p> <p>P8: specifications</p> <p>P9: Maintain stock-flow to and from neutralization process within production requirements</p> <p>P10: Identify out-of-specification product, process and equipment performance</p> <p>P11: Shut down the neutralisation process according to company procedures</p> <p>P12: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P13: Record workplace information in the appropriate format</p>
CU4. Perform bleaching process	<p>P1: Prepare bleaching process for operation</p> <p>P2: Set the bleaching process to meet production specifications</p> <p>P3: Perform bleaching process</p> <p>P4: Monitor control points to confirm that performance is maintained within specification</p> <p>P5: Ensure bleached product meets color specifications</p> <p>P6: Maintain stock-flow to and from bleaching within production requirements</p> <p>P7: Identify out-of-specification product, process and equipment performance</p> <p>P8: Shut down bleaching process</p> <p>P9: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P10: Record workplace information in the appropriate format</p>

CU5. Perform deodorizing process	<p>P1: Prepare deodorizing process for operation</p> <p>P2: Set the deodorising process to meet production requirements</p> <p>P3: Perform deodorizing process</p> <p>P4: Start the deodorising process according to company specifications</p> <p>P5: Monitor control points to confirm that performance is maintained within specification</p> <p>P6: Ensure deodorized product meets odor and flavor specifications</p> <p>P7: Check equipment to confirm operating condition</p> <p>P8: Identify out-of-specification product, process and equipment performance</p> <p>P9: Shut down the deodorising process according to company procedures</p> <p>P10: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P11: Record workplace information in the appropriate format</p>
CU6. Perform hydrogenation process	<p>P1: Prepare hydrogenation process for operation</p> <p>P2: Set the hydrogenation process to meet production requirements</p> <p>P3: Perform hydrogenation process</p> <p>P4: Monitor control points to confirm that performance is maintained within specification</p> <p>P5: Ensure Hydrogenated product meets melting point and fat profile specifications</p> <p>P6: Identify out-of-specification product, process and equipment performance</p> <p>P7: Shut down hydrogenation process</p> <p>P8: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P9: Record workplace information in the appropriate format</p>

CU7. Perform interesterification process	<p>P1: Prepare interesterification process for operation</p> <p>P2: Set the interesterification process to meet production requirements</p> <p>P3: Perform interesterification process</p> <p>P4: Ensure the interesterification process is started up according to company specifications</p> <p>P5: Monitor control points to confirm that performance is maintained within specification</p> <p>P6: Ensure product modification meets melting point and odor specifications</p> <p>P7: Check equipment to confirm operating condition</p> <p>P8: Stock flow to and from interesterification process is maintained within production requirements</p> <p>P9: Identify and report out-of-specification product, process and equipment performance</p> <p>P10: Shut down Interesterification process according to company procedures</p> <p>P11: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P12: Record workplace information in the appropriate format</p>
CU8. Perform fractionation process	<p>P1: Prepare fractionation process for operation</p> <p>P2: Ensure the availability of materials to meet production requirements</p> <p>P3: Confirm readiness of services for the operation</p> <p>P4: Check equipment to confirm readiness for use</p> <p>P5: Set the fractionation process to meet production requirements</p> <p>P6: Perform fractionation process</p> <p>P7: Monitor control points to confirm that performance is maintained within specification</p> <p>P8: Ensure fractionated product meets melting point specifications</p>

	<p>P9: Maintain stock-flow to and from fractionation process within production requirements</p> <p>P10: Identify and report out-of-specification product, process and equipment performance</p> <p>P11: Shut down the fractionation process according to company procedures</p> <p>P12: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P13: Record workplace information in the appropriate format</p>
CU9. Perform processed liquid fill process	<p>P1: Prepare processed liquid fill process for operation</p> <p>P2: Set processed liquid fill process is set to meet production requirements</p> <p>P3: Perform a processed liquid fill process according to company specifications</p> <p>P4: Monitor control points to confirm that performance is maintained within specification</p> <p>P5: Ensure processed liquid fill meets specifications</p> <p>P6: Identify and report out-of-specification product, process and equipment performance</p> <p>P7: Shut down processed liquid fill process according to company procedures</p> <p>P8: Collect, treat, dispose off or recycle waste according to company procedures</p> <p>P9: Ensure complete cleaning of filling line</p> <p>P10: Ensure routine maintenance of filling line</p> <p>P11: Record workplace information in the appropriate format</p>

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- purpose of the tanker loading/unloading process
- loading and unloading procedure
- quality parameters to be achieved during the loading/unloading process
- compatibility of different oils and the implications for loading/unloading
- temperature requirements for the transfer of different oils
- common problems in the tanker loading/unloading process
- services used in the tanker loading/unloading process
- purpose and basic principles of the 45deodorizing45on process
- relationship between the neutralization process and other edible oils and fats processes
- stages and changes which occur during neutralization
- effect of 45deodorizing45on the process on the end product
- quality characteristics to be achieved during neutralization
- process specifications, procedures, and operating parameters during neutralization
- significance and methods of monitoring control points within the neutralization process
- purpose and basic principles of the bleaching process
- stages and changes which occur during bleaching
- types of materials used in bleaching
- effect of bleaching process on the end product
- significance and methods of monitoring control points within the bleaching process
- purpose and basic principles of the 45deodorizing process
- stages and changes which occur during 45deodorizing
- effect of 45the deodorizing process on the end product
- quality characteristics to be achieved after 45deodorizing
- significance and methods of monitoring control points within the 45deodorizing process

- purpose and basic principles of the hydrogenation process
- stages and changes which occur during hydrogenation
- effect of hydrogenation process on the end product
- quality characteristics to be achieved after hydrogenation
- purpose and basic principles of the interesterification process
- stages and changes which occur during interesterification
- effect of the interesterification process on the end product
- quality characteristics to be achieved after interesterification process
- purpose and basic principles of the fractionation process
- stages and changes which occur during fractionation
- effect of fractionation process on the end product
- significance and methods of monitoring control points within the fractionation process
- purpose and basic principles of the processed liquid fill process
- stages and changes which occur during the processed liquid fill process
- significance and methods of monitoring control points within the processed liquid fill process
- shutdown and cleaning requirements for all processes

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Parameters to determine rancidity in oils and fats
- Steps involved in deodorization, neutralization, hydrogenation, and interesterification
- Chemical changes occurred during deodorization, neutralization, hydrogenation, and interesterification of oils and fats

- Significance of control points in deodorization, neutralization, hydrogenation, and interesterification of oils and fats

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Analysis lab for all fats and oil analysis
2	Lovibond tintometer
3	Pycnometer
4	Practical training will need to be done in the edible oil industry

CS-14: Prerform Milling of Grains**Overview:**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of grain milling. This unit covers the competencies required to prepare for grains milling. It provides an introduction to the main practical and activities associated with milling process.

Competency Units	Performance Criterion
CU1. Perform milling of wheat	P1: Perform cleaning P2: Ensure tempering and conditioning of wheat grains P3: Ensure grinding of wheat grains as per specifications and requirements P4: Monitor sifting of milled wheat products P5: Ensure packaging and storage of wheat products
CU2. Perform milling of rice	P1: Perform cleaning of paddy P2: Monitor par boiling of paddy P3: Operate husker P4: Operate whitener P5: Operate polisher P6: Perform sorting to remove broken rice kernels P7: Ensure packaging and storage of rice products
CU3. Perform milling of corn	P1: Perform cleaning P2: Ensure tempering and conditioning of corn grains P3: Ensure grinding of corn grains as per specifications and requirements P4: Monitor sifting of milled corn products P5: Monitor separation of starch from corn P6: Monitor separation of gluten from corn P7: Perform oil processing from corn P8: Ensure packaging and storage of wheat products

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Milling of wheat
- Milling of rice
- Milling of corn
- Nutritional benefits of bran
- Oil separation from corn

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Operate milling machine
- Determine moisture
- Determine protein

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Milling machine
2	Sifter
3	Rice sorter
4	Packing machine
5	De-husker
6	Whitener
7	Polisher

CS-15: Perform Butter Making Process**Overview:**

This competency standard covers the skills and knowledge required to run the butter making process. The trainees will be able to enhance skills for butter production.

Competency units	Performance criteria
CU1. Receive milk for process	P1: Conduct sensory evaluation P2: Analyze quality of milk
CU2. Prepare cream	P1: Separate fat from milk P2: Maintain temperature of separated cream P3: Pasterurize cream
CU3. Inoculate culture	P1: Monitor culture temperature P2: Apply appropriate dosage according to batch size P3: Maintain batch temperature P4: Check pH of cream
CU4. Perform butter churning	P1: Operate butter churner P2: Maintain specification by monitoring control points P3: Ensure butter product meets specifications P4: Collect whey and pumped to a designated storage location for further processing
CU5. Add butter additives	P1: Apply salt, colors and flavors according to set specification P2: Mix additives properly
CU6. Perform testing of prepared butter	P1: Determine moisture percentage P2: Determine fat percentage P3: Determine salt contents
CU7. Perform butter pressing/moulding	P1: Operate pressing machine P2: Prepare moulds/blocks of butter
CU8. Perform Packaging and	P1: Operate packaging machine P2: Ensure labeling

labelling	
CU9. Ensure optimum storage conditions	P1: Monitor storage temperature P2: Control cross contamination

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- purpose and basic principles of the butter making process
- relationship between the butter making process and other dairy processes
- stages and changes which occur during butter making
- principles of product preservation
- types of additives/ingredients
- microbiological considerations in butter making
- effect of butter making process on the end product
- quality characteristics to be achieved in butter
- process specifications, procedures, and operating parameters
- equipment and instrumentation components, purpose and operation
- significance and methods of monitoring control points within the butter making process
- services used in the butter making process
- common causes of variation and corrective action required
- environmental issues and controls
- shutdown and cleaning requirements
- associated with changeovers and types of shutdowns
- waste handling requirements and procedures

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Check butter quality against parameters
- Operate cream separator
- Operate churner

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Churning machine
2	Butter cream separator
3	Butyrometer
4	Gerber machine
5	Pasteurizer

CS-16: Apply Food Waste Management Techniques**Overview**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic applications of food waste management techniques. It provides an introduction to the main theories and activities associated with waste management techniques being applied in the food industry.

Competency Units	Performance Criteria
CU1. Identify the process wastes	P1: Manage waste and by-products P2: Categorize different types of food waste
CU2. Apply the standard operating procedure of waste disposal	P1: Check characteristics of food waste P2: Perform different analyses of food waste P3: Apply waste disposal according to SOP's and environmental standards
CU3. Analyze environmental pollution due to food waste	P1: Apply analytical techniques to examine sources of environmental pollution P2: Execute different steps to reduce environmental pollution
CU4. Apply basic mathematics to calculate the impact of loss	P1: Calculate the waste percentage P2: Interpret the results

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Different types of wastes
- Implementation of different strategies to reduce wastes in the food industry
- Help to reduce environmental pollution

- Enlist the food waste disposal ways
- Enlist the ways to minimize wastage

Critical Evidence (s) required

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Apply the standard operating procedure of waste disposal

Tools & Equipment required:

Sr. No	DESCRIPTION
1	pH meter
2	Atomic absorption spectrometer
3	Flame photometer
4	Conductivity meter
5	COD apparatus

CS-17: Perform Canning process**Overview**

This competency standard covers the skills and knowledge required to learn and operate the fill, and close can seam and perform the retort process. The trainees will be able to enhance canning skills.

Competency units	Performance criteria
CU1. Perform preparatory operations	P1: Perform blanching as per set specifications. P2: Operate peeler. P3: Operate destoner. P4: Perform Cutting, Slicing, Dicing, Shredding, Pulping, Crushing etc. P5: Perform Mixing according to product requirements
CU2. Prepare syrup/brine for fruits and vegetables	P1: Perform Syruping for fruits. P2: Perform brining for vegetables P3: Check quality parameters (Brix, viscosity, acidity, sensory evaluation)
CU3. Perform Fill and close can seams	P1: Perform to start the filling process according to company procedures P2: Check filled and closed containers meet specification P3: Check cans leakage P4: Operate filler and seamer machine P5: Record workplace information in the appropriate format
CU4. Perform and operate the retort process	P1: Prepare the retort process for the operation to meet production requirements P2: Check materials available to meet production requirements P3: Check services ready for operation P4: Perform the retort process according to company procedures P5: Check retorted product meets the specification P6: Identify out-of-specification product, process and equipment

	<p>performance</p> <p>P7: Collect, treat and dispose of waste according to company procedures</p>
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Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- materials specifications and quality requirements
- purpose and basic principles of filling and closing
- stages in the filling and closing process
- purpose of hermetic sealing and types of containers suitable for use. This includes an understanding of materials and costings used in packaging
- effect of process variables such as headspace and fill temperature on the process
- waste handling requirements and procedures
- recording requirements and procedures
- purpose and basic principles of freezing and freezing methods used
- basic principles and operation of the refrigeration system
- stages and changes which occur to the product during freezing
- purpose and basic principles of heat treatment. This includes type and growth requirements of micro-organisms in food
- heat treatment requirements for low and/or high acid foods
- the effect of heat treatment on the end product

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Prepare fruits syrup
- Prepare brine
- Determine brix
- Operate seamer

Tools & Equipment required:

Sr. No	Item
1	Can Filler
2	Seamer

CS-18: Perform Pickling Process**Overview:**

This competency standard covers the skills and knowledge required to operate the pickling process for fruits and vegetables. The trainees will be able to enhance skills related to pickling.

Competency units	Performance criterion
CU1. Prepare raw materials for pickling	P1: Inspect raw materials for use in production to meet specifications P2: Perform sorting, sizing and grading machines to meet specifications P3: Operate washing, cleaning, peeling, destoning units P4: Operate conveying equipment/systems used to transfer materials to required locations P5: Operate blanching process/conditions (time, temperature, etc.) P6: Maintain storage requirements of semi-processed products
CU2. Mix ingredients	P1: Prepare mixtures of vegetables/fruits and additives according to product specification P2: Store product at defined conditions for aging
CU3. Packaging of pickles	P1: Select appropriate packaging material P2: Operate filling and sealing machine

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- Quality requirements of raw materials and packaging
- Cleaning methods
- Sorting and grading criteria and procedure
- Quality characteristics of the fermented and pickled product

- Process specifications, procedures and operating parameters for pre-preparations, canning and pickling of fruits and vegetables
- Common causes of variation and corrective action required during mentioned processes
- Waste handling requirements and procedures

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Cutting of fruits and vegetables
- Prepare mixtures of fruits and vegetables

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Basic analysis lab
2	Pickling unit

CS-19: Ensure Water Treatment in Food Industry**Overview:**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of water treatment for food industry. It provides useful information about different water treatment processes.

Competency Units	Performance Criteria
CU1. Ensure raw and final water analysis	<p>P1: Ensure availability of water testing chemicals and equipment are available</p> <p>P2: Check the physical, chemical and microbiological analysis of raw and final water as per the defined frequency</p> <p>P3: Check all chemicals and equipment are in good working conditions</p> <p>P4: Read specifications for raw and final water standards</p>
CU2. Ensure pre filtration	<p>P1: Operate pre filter (sand, dirt, silt and other sediments)</p> <p>P2: Check carbon filter</p> <p>P3: Check water odour</p>
CU3. Ensure satisfactory working of RO (reverse osmosis) unit	<p>P1: Check RO memberane</p> <p>P2: Ensure cleaning of membrane</p> <p>P3: Change membrane after certain running hours</p>
CU4. Ensure satisfactory working of UV	<p>P1: Check UV lamp</p> <p>P2: Operate UV lamp</p> <p>P3: Ensure the lamp is in well working condition</p> <p>P4: Analyze water sample before and after UV</p> <p>P5: Replace lamp after its life</p>
CU5. Ensure ultrafiltration (UF)	<p>P1: Check UF membrane</p> <p>P2: Change UF as per standard requirement</p>
CU6. Perform activated	<p>P1: Check post carbon filter</p>

carbon filtration	P2: Change carbon filter as per standard requirement P3: Operate RO water purifier P4: Operate TDS controller
CU7. Ensure satisfactory working of Ozonator	P1: Check the exact dose of ozone to water P2: Ensure performance of ozonator as per advised in manual P3: Check the pressure gauge on ozonator
CU8. Perform water testing	P1: Determine TDS (total dissolved solids) P2: Check microbial contamination of water P3: Check sensory properties of water

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Different types of water filter
- Water treatment chemicals
- RO working principle

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Determine TDS
- Conduct TPC

Tools & Equipment required:

Sr. No	DESCRIPTION
1	RO unit
2	pH
3	TDS meter
4	Colony counter

CS-20: Perform Non-Carbonated Beverage Processing**Overview**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of non carbonated beverage processing. It provides an introduction to the main theories and activities associated with non carbonated beverage processing being applied in the food industry.

Competency Units	Performance Criteria
CU1. Apply standard formulation procedure	<p>P1: Ensure availability of all ingredients (pulp) as per formulation</p> <p>P2: Ensure formulation contains permitted ingredients</p> <p>P3: Tag each food ingredients appropriately</p> <p>P4: Check the working of weighing balance and its calibration.</p>
CU2. Apply mixing process	<p>P1: Check the working of mixing tank /agitator</p> <p>P2: Check availability of all utilities</p> <p>P3: Check the cleaning of all equipment used</p> <p>P4: Check strainers and line filters are in sound condition.</p>
CU3. Ensure Pasteurization and homogenization of for non-carbonated drinks	<p>P1: Check availability of steam for pasteurization</p> <p>P2: Make sure pasteurizer temp gauge is in working condition and calibrated.</p> <p>P3: Ensure there is no leakage from the pasteurizer</p> <p>P4: Ensure homogenizer is in good working condition</p> <p>P5: Check the sample before and after homogenization</p>
CU4. Filling of beverages	<p>P1: Ensure quality of packaging material</p> <p>P2: Ensure all filters and strainers are in place before starting beverage filling.</p> <p>P3: Ensure product meet the quality parameters as per standard specifications</p> <p>P4: Ensure properly filling and sealing of capping machines</p>

	P5: Check the working of the label and date coding printer
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Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Beverage equipment
- Dates coding machine operation
- Pasteurization time and temp.

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Perform mixing and pasteurization of beverage
- Perform physicochemical quality test
- Perform microbiological tests

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Mixing tank
2	Pasteurizer, carbo cooler
3	Filler and capper
4	pH meter
5	Refractometer

CS-21: Prepare Fermented Dairy Products**Overview**

This competency standard covers the skills and knowledge required to produce cheese, evaporated milk, dry milk, yogurt and butter etc. The trainees will be able to learn production skills of various fermented dairy products.

Competency Units	Performance criteria
CU1. Prepare the fermentation process for operation	<p>P1: Confirmed materials available to meet production requirements as per product demand</p> <p>P2: Standardize milk for yogurt making as per product requirement</p> <p>P3: Confirm services as being ready for operation</p> <p>P4: Check equipment to confirm readiness for use</p> <p>P5: Check inoculum is ready for the fermentation process</p> <p>P6: Set the fermentation process to meet production specifications</p>
CU2. Operate and monitor the fermentation process	<p>P1: Start the fermentation process according to company specifications</p> <p>P2: Monitor control points to confirm that performance is maintained within specification</p> <p>P3: Monitor equipment to confirm operating condition</p> <p>P4: Stock flow to and from the fermentation process is maintained within production requirements</p>
CU3. Shut down fermentation process	<p>P1: Shutdown fermentation process according to company procedures</p> <p>P2: Collect and dispose of waste according to company waste management procedures</p>
CU4. Recording information	<p>P1: Record workplace information in the appropriate format</p> <p>P2: Ensure record of all consumables as per requirements</p>

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- purpose and basic principles of the fermentation process
- relationship between the fermentation process and other dairy processes
- stages and changes which occur during fermentation
- critical factors in the fermentation process
- parameters for efficient fermentation
- types of starters
- fermentation reactions in milk
- microbiological considerations in fermentation
- effect of the fermentation process on the end product
- quality characteristics to be achieved
- process specifications, procedures, and operating parameters
- equipment and instrumentation components, purpose and operation
- significance and methods of monitoring
- control points within the fermentation process
- services used in the fermentation process
- common causes of variation and corrective action
- procedures and responsibility for reporting problems
- environmental issues and controls
- shutdown and cleaning requirements
- associated with changeovers and types of shutdowns
- waste handling requirements and procedures
- recording requirements and procedures

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Raw material requirements to produce various fermented dairy products
- Quality parameters to be achieved for different fermented products
- Physico-chemical changes occurred during the conversion of milk into yogurt
- Role of inoculum in the fermentation process

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Milk analysis lab
2	Microbiology lab
3	Incubator

CS-22: Prepare Non-Fermented Dairy Products**Overview**

This competency standard covers the skills and knowledge required to prepare non fermented dairy products such as pasteurized milk, UHT milk, milk powder etc. The trainees will be able to enhance skills for production of non fermented dairy products.

Competency units	Performance criteria
CU1. Receiving milk	P1: Perform milk sampling P2: Perform sensory evaluation P3: Perform milk analysis (Fat, SNF, pH, COB and APT tests) P4: Perform adulteration tests
CU2. Perform pasteurization	P1: Check pasteurizer to confirm readiness for use P2: Set time and temperature for pasteurization P3: Operate pasteurizer to meet production as per standard requirements
CU3. Perform fat separation as per product requirement	P1: Prepare the fat separator for operation P2: Operate fat separator as per manufacturer requirement P3: Collect cream from separator P4: Ensure record-keeping in the standard format
CU4. Perform milk standardization	P1: Standardize pasteurized milk by fat addition P2: Perform analysis for SNF and Fat % in pasteurized milk P3: Ensure record-keeping in the standard format
CU5. Pack pasteurized milk	P1: Operate pasteurized milk filler P2: Maintain sufficient packaging material and record-keeping of packaging material P3: Monitor proper labeling of products P4: Record keeping in the standard format
CU6. Operate milk evaporator	P1: Run milk evaporator as per company requirement P2: Record all parameters and product specifications P3: Perform CIP of evaporator plant

CU7. Prepare UHT milk	P1: Check UHT to confirm readiness for use P2: Set time and temperature for UHT P3: Operate UHT to meet production as per standard requirements
CU8. Pack UHT milk	P1: Operate UHT milk filler/Tetra pack machine P2: Maintain sufficient packaging material and record-keeping of packaging material P3: Monitor proper labeling of products P4: Record keeping in the standard format
CU9. Prepare milk powder	P1: Check milk dryer to confirm readiness for use P2: Set time and temperature for drying P3: Operate milk/spray dryer to meet production as per standard requirements P4: Perform routine analysis (Fat, moisture, density)

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- purpose and basic principles of the fermentation process
- relationship between the fermentation process and other dairy processes
- stages and changes which occur during fermentation
- critical factors in the fermentation process
- parameters for efficient fermentation
- types of starters
- fermentation reactions in milk
- microbiological considerations in fermentation
- effect of the fermentation process on the end product
- quality characteristics to be achieved
- process specifications, procedures, and operating parameters
- equipment and instrumentation components, purpose and operation
- significance and methods of monitoring

- control points within the fermentation process
- services used in the fermentation process
- common causes of variation and corrective action
- procedures and responsibility for reporting problems
- environmental issues and controls
- shutdown and cleaning requirements
- associated with changeovers and types of shutdowns
- waste handling requirements and procedures
- recording requirements and procedures
- quality characteristics to be achieved for pasteurized food
- process specifications, procedures, and operating parameters
- equipment and instrumentation components,
- significance and methods of monitoring
- control points within the separation process
- shutdown and cleaning requirements
- associated with changeovers and types of shutdowns
- waste handling requirements and procedures
- types of heat treatment and their specific temperatures are given to milk
- holding time and temperature relationship

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Determine fat of cream
- Operate fat separator
- Operate pasteurizer

Tools & Equipment required

Sr. No	DESCRIPTION
1	Plate heat exchanger
2	Fat separator
3	Incubator
4	Spray Dryer
5	Pasteurizer

CS-23: Perform Egg Processing and Preservation**Overview**

This competency unit covers the skills and required knowledge to demonstrate the Eggs processing and preservation.

Competency Units	Performance Criterion
CU1. Receive eggs	P1: Check cleaning of eggs P2: Check cleanliness of egg trays P3: Check expiry date of eggs P4: Perform water soaking test of eggs
CU2. Grade and apply coating of eggs	P1: Candle Eggs using appropriate equipment in a light-proof area. P2: Grade Eggs according to weight and quality P3: Report to the supervisor according to organization procedures in case of rotten eggs. P4: Wash Eggs with running water P5: Oil Eggs when required according to legislative requirements and organizational practice.
CU3. Store eggs	P1: Clean and sanitize cold store P2: Monitor temperature and humidity of cold store P3: Maintain records of cold store temperature and humidity.
CU4. Produce egg powder	P1: Remove egg shells P2: Separate egg yolk/egg white P3: Operate spray dryer P4: Operate drum dryer P5: Fill egg powder with nitrogen (inert gas) P6: Pack and store egg powder in cold store

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- egg grading and sizes
- hazard analysis and quality assurance
- sanitizers and activity, and measurement
- the need to maximize hygiene practices and awareness
- Occupational Health and Safety (OHS), food safety and environment legislative and enterprise requirements

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- operate spray dryer
- operate drum dryer
- perform egg washing

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Egg Washing Machine
2	Drum dryer
3	Spray dryer

CS-24: Perform Sea Food Processing**Overview:**

This competency standard covers the skills and knowledge required to perform sea food processing especially fish. The trainees will be able to enhance skills to perform sea foods processing.

Competency units	Performance criteria
CU1. Receive the raw material	P1: Check freshness of sea food according to standards P2: Perform salting and grading on basis of size, freshness, species and damage P3: Maintain and ensure storage temperature at reception
CU2. Perform preparatory operations	P1: Perform blanching and washing to remove slime P2: Operate scaler machine to remove scales P3: Apply de-heading of fish P4: Remove fins P5: Perform gutting and remove visera
CU3. Perform cutting and filleting	P1: Perform cutting of fish P2: Prepare fish fillets
CU4. Pack and store fish cuts	P1: Use appropriate packaging material for fish cuts P2: Ensure storage of fish products at recommended temperature

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- types of fish
- types of sea food
- catching of fish
- handling of fish

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Perform fish cutting
- Perform fish grading
- Perform fish packing

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Cutters
2	Scalers
3	Washer
4	De-heading machine
5	Knives
6	Filleting machine
7	Skinning machine

CS-25: Prepare Snacks**Overview:**

This competency standard covers the skills and knowledge required to snack food products. The trainees will be able to enhance skills for the production of various types of Snacks.

Competency units	Performance criteria
CU1. Receive & Prepare ingredients	P1: Receive ingredients as per protocols P2: Select ingredients for batch preparation as per manufacturing order P3: Check quality parameters of received goods.
CU2. Mix ingredients	P1: Ensure the standard mixing of dry and wet ingredients for batch making P2: Check viscosity, moisture and uniformity of mixtures
CU3. Perform Moulding	P1: Select moulds as per product specs P2: Ensure cleaning of moulds before processing P3: Load the batch in moulding machine
CU4. Perform Frying/Baking	P1: Check fryer and its utilities before operation P2: Check oven for temperature adjustment P3: Ensure cleaning of all accessories P4: Operate fryer/Baking oven
CU5. Ensure cooling	P1: Transfer batch to cooling section to ensure integrity of product P2: Follow time and temperature according to prepared batch.
CU6. Pack and store snack products	P1: Select appropriate packaging material P2: Operate packaging machine P3: Check storage temperature of stored products

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- Describe classification of snacks
- Operation of fryer and oven
- Describe types of extruders
- Describe types of moulds
- Quality parameters of snacks
- Caramelization
- Role of extrusion ingredients

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Operate extruder
- Prepare mix (According to recipe)

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Extruder
2	Dies
3	Mixer
4	Wrapping machine
5	Moisture analyzer

CS-26: Use Food Grade Packaging Material**Overview:**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the use of food grade packaging material. It provides useful learning about food grade packaging in food industry.

Competency Units	Performance Criteria
CU1. Receive food packaging	P1: Inspect the incoming packaging material as per specification P2: Verify labeled contents as per manufacturing order P3: Operate date coding machine P4: Ensure packaged products meet set requirements P5: Make tertiary packaging for bulk handling for warehouses storage & shipping/transport P6: Protect finished product from environmental factors
CU2. Test packaging material	P1: Perform physical testing of packaging material P2: Perform chemical testing of packaging material P3: Perform microbiological testing of packaging material
CU3. Perform PET bottles making	P1: Prepare preform P2: Operate blowing machine P3: Check bottle quality against specifications
CU4. Perform vacuum packing	P1: Identify the vacuum packing method P2: Analyze plastic film package P3: Ensure air removal from the package before sealing P4: Apply Package sealing P5: Replace internal oxygen with nitrogen gas.

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Characteristics of a good packing material
- Food grade packaging
- Knowledge of food packaging and types of packaging material
- Describe how packaging can contaminate the product.
- Enlist the properties of good food packaging

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Operate vaccum packaging
- Operate date coding machine

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Filler, ,
2	Capper
3	Labeler
4	Date coder
5	Palletizer
6	Shrinkwrap

CS-27: Perform Food Microbiological Tests**Overview:**

This competency standard covers the skills and knowledge required to demonstrate the application of microbiological examination and techniques in food processing and preservation.

Competency Unit	Performance Criteria
CU1. Conduct product Sampling	P1: Collect sample as per product category P2: Analyze sample size and integrity of the container P3: Label and record sample P4: Store sample as per the required environment
CU2. Prepare stock and working solution	P1: Make solutions of required concentration P2: Make different dilutions to make a working solution
CU3. Prepare culture media	P1: Prepare agar culture medium P2: Prepare broth culture medium
CU4. Assess cleaning efficiency	P1: Perform Swab Test P2: Perform Dilution Test
CU5. Count colonies	P1: Determine type of microbes P2: Determine coliform, salmonella and TPC
CU6. Inoculate and incubate microorganism on growth medium	P1: Inoculate/streak the culture media with microorganism P2: Label the culture media with suitable name/code P3: Incubate the culture media at the optimum growth temperature
CU7. Calculate Total plate count	P1: Operate colony counter P2: Count colonies P3: Calculate TPC as CFU/g

Understanding & Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- Prokaryotic and eukaryotic cell
- Control of microorganisms
- Principles of microbial spoilage
- Sterilization techniques
- Culture mediums for food fermentations
- Foodborne diseases

Critical evidence(s) required:

The trainee needs to produce the following critical evidence(s) to be competent in this competency standard:

- Prepare growth medium
- Inoculate the medium
- Operate colony counter

Tools & Equipment Required:

Sr.	DESCRIPTION
1.	Sterile Beaker
2.	Sterile Graduated pipettes
3.	Sterile Petri Dishes
4.	Sterile Flasks
5.	Sterile Test or culture tubes
6.	Test or culture tube racks
7.	Sterile tools for manipulating food samples; spoons, scissors, forceps, knives, etc.
8.	Dilution Bottles
9.	Inoculating needle and loop
10.	Bunsen or Fish Burner
11.	Mechanical Blender
12.	Blender Jar

13.	Balance
14.	Vortex mixer
15.	Light Microscope
16.	Microscope slides and coverslips
17.	Autoclave
18.	Laminar flow cabinet
19.	Water bath
20.	Incubator
21.	Colony counter, darkfield, with a suitable light source and grid plate
22.	Thermometer
23.	pH meter

CS-28: Comply Quality Standards**Overview**

This competency standard covers the skills and knowledge required to perform according to set quality standards. The trainees will be able to enhance skills to comply process according to quality standards.

Competency Units	Performance Criteria
CU1. Perform Receiving of Raw and Packaging Material	P1: Perform Physico-Chemical testing of the Raw material as per set Standard Operating procedure P2: Examine COA (Certificate of analysis) P3: Record the results
CU2. Perform Batch Making operations	P1: Monitor the weighing of each ingredient as per set recipes. P2: Set the production plant as per developed SOPs. P3: Operate the equipment to prepare the batch. P4: Execute the production as per set standards. P5: Analyze the production during operations against the Quality Plan.
CU3. Perform Sizing, Wrapping, and Packing Operations.	P1: Operate the Batch roller and dies for the production of the product as per set weight and size. P2: Operate the Cooling section of the line to produce the product as per set standards. P3: Operate the wrapping machines to pack the product. P4: Operate the Packing machines for bag making of the final product as per set standards.
CU4. Monitor Quality standards	P1: Understand the quality parameters and specifications. P2: Monitor the results during the production process. P3: Record the results in the standard document.
CU5. Apply Basic Mathematical	P1: Perform basic mathematics to calculate the shift production.

Calculations	P2: Analyze the results of the different batch by performing basic mathematics and statistical analysis.
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Understanding and Knowledge

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- certificate of analysis
- standard operating procedures
- recording of results
- packing operations
- quality standards
- basic mathematical calculations

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Perform gap analysis
- Determine ccp
- Determine prp

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Computer
2	Printer

CS-29: Implement Quality Management System**Overview**

This competency standard covers the skills and knowledge required to implement the quality management system. The trainees will be able to demonstrate the skills and expertise required to monitor and maintain quality in the work area and able to contribute to the continual improvement of the organization.

Competency Unit	Performance Criteria
CU1. Monitor Quality in Work area	P1: Ensure Good hygiene practices P2: Ensure Good Manufacturing practices to confirm the quality of output and/or service P3: Monitor control points to confirm the quality of output P4: Identify nonconformities and take corrective actions. P5: Record and Report non-conformities.
CU2. Contribute to continual improvement	P1: Identify barriers to improve quality performance P2: Identify and investigate likely causes P3: Identify solutions and implement or report
CU3. Participate in Internal Audits	P1: Understand Audit criteria P2: Develop an audit plan P3: Organize audit documents P4: Perform adequacy audit P5: Participate in on-site audit as a team member P6: Perform Root Cause Analysis P7: Develop Corrective Action Preventive Action reports P8: Record and maintain information
CU4. Implement food quality policy	P1: Perform manufacturing P2: Perform products delivery P3: Implement Food Quality standards P4: Implement Food Safety standards P5: Make mutually agreed customer requirements related to food quality and safety

CU5. Maintain food quality records	P1: Implement traceability P2: Follow appropriate practices P3: Perform documentation P4: Maintain records as legal requirements related documentation P5: Maintain record relating manufacturing record P6: Maintain record relating processing P7: Maintain record relating packing P8: Maintain record relating packing, distribution, receipt, holding or importation of food products
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Understanding & Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- Dimensions of product and service quality
- Difference between Quality Assurance and Quality Control
- GHP and Ritual cleansing
- GMP, PRP, and HACCP
- Conducting Sensory Evaluation
- Food QMS and its components
- Internal auditing, Types of Audits, CAPA reports
- Appropriate practices in the food business
- Understand traceability
- Prepare documentation
- Understand and describe appropriate practices in the food business
- Understand records maintaining
- Prepare manufacturing, packing, processing, distribution and import records

Critical evidence(s) required:

The trainee needs to produce the following critical evidence(s) to be competent in this competency standard:

- Develop an Audit Plan
- Conduct an Adequacy Audit
- Prepare a corrective action Report.

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Quality Control office
2	Computer
3	Printer
4	Files

CS-30: Ensure Compliance Of Food Safety System**Overview**

This Competency Standard identifies the competencies required to apply skills and knowledge to control food hazards by applying HACCP, a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement, manufacturing, distribution and consumption of the finished product. The trainee will be expected to apply hazards control principles during food processing at the workplace.

Competency Units	Performance Criteria
CU1. Monitor food safety system	P1: Conduct risk assessment P2: Comply with the Food Safety system.
CU2. Perform work according to the Food Safety System	P1: Monitor the production against set standards of the Food Safety system. P2: Record the results.
CU3. Apply HACCP principles in food production	P1: Conduct hazard analysis to develop a list of hazards which are of such significance and reasonably likely to cause injury or illness (Principle 1) P2: Determine critical control points to prevent or eliminate a food safety hazard or reduce it to an acceptable level (CCPs), (Principle 2) P3: Establish critical limits as per regulatory standards and industry guidelines, (Principle 3) P4: Establish monitoring procedures to produce an accurate record for future use in verification (Principle 4) P5: Establish corrective actions to identify health hazards and to establish strategies to prevent, eliminate, or reduce their occurrence (Principle 5) P6: Establish verification procedures for identification of

	<p>the hazards, critical control points, critical limits as per industry guidelines (Principle 6)</p> <p>P7: Establish record-keeping and documentation procedures as per industry guidelines/procedure (Principle 7)</p>
CU4. Participate in internal audit procedures	<p>P1: Ensure the implementation of all relevant SOPs.</p> <p>P2: Maintain a record of all checklists and logs</p> <p>P3: Perform self-assessment and gap closure of all applicable standards</p>

Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

1. Define a hazard.
2. Describe food allergens.
3. Describe chemical, microbiological, and physical hazards.
4. Define critical control points in the food processing unit.
5. Define critical control limits
6. Define Operational Prerequisite Program (OPRP)
7. Describe preventive measures to control the happening of a hazard.
8. Know the limits of additives to be used in food processing.
9. Know regulatory affairs regarding Food Safety
10. Know about internal audits
11. Define monitoring procedures

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

1. Identify Hazards
2. Conduct risk assessment

3. Identify Critical Control Points (CCPs)
4. Identify PRPs

Tools and Equipment required

The tools and equipment required for this competency standard are given below:

Sr. No	Items
1.	Decision Tree
2.	Risk Assessment Tool
3.	Flow Diagram of process

CS-31: Monitor Freezing Process**Overview:**

This competency standard covers the skills and knowledge required to monitor the freezing process for food products. The trainees will be able to enhance skills to monitor the freezing process for various foods.

Competency units	Performance criteria
CU1. Prepare food products for freezing	P1: Perform all preparatory operations for fruits, vegetable, meat, fish etc P2: Pack prepared food products in appropriate packaging material P3: Seal the package
CU2. Monitor the freezing process	P1: Calibrate temperature guage P2: Check temperature of freezer P3: Check freezer cleaning P4: Examine the freezing process to meet production requirements
CU3. Record information	P1: Record temperature in the appropriate format P2: Calculate the efficiency of the freezing plant

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- purpose and basic principles of freezing
- stages and changes which occur during freezing
- effect of process stages on the end product
- quality characteristics and uses of frozen product
- key variables in freezing including temperature, air velocity, humidity, pressure
- microbiological considerations in freezing
- significance and method of monitoring control points within the process
- environmental issues and controls

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Check freezer temperature
- Check temperature of frozen product

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Basic analysis lab
2	Freezing chamber
3	Microbiology lab

CS-32: Apply Meat Curing and Smoking**Overview:**

This competency standard covers the skills and required knowledge to demonstrate the understanding of meat curing and smoking processes.

Competency Units	Performance Criteria
CU1. Prepare, operate and clean processing equipment used for curing	P1: Prepare processing equipment P2: Clean processing equipment according to the manufacturer's specifications, and OH&S, hygiene, and workplace requirements.
CU2. Prepare meat and ingredients	P1: Select meat according to product specifications. P2: Prepare meat by adding ingredients according to product specifications, and hygiene and workplace requirements.
CU3. Prepare brines	P1: Add required amount of water and other liquid and solid additives in correct order and mixed according to product specifications P2: Use Hydrometer (salinometer) to check the brine solution.
CU4. Process and store the product	P1: Perform curing according to product specifications and health regulations. P2: Monitor process regularly P3: Make adjustments to the process as required to achieve product specifications. P4: Store product according to product specifications
CU5. Prepare meat and ingredients for smoking	P1: Select meat according to product specifications. P2: Prepare meat according to product specifications, and hygiene and workplace requirements.
CU6. Smoke the meat products	P1: Check the product to ensure correct spacing prior to loading.

	<p>P2: Insert core temperature probes into the center of the product, to record the temperatures, as appropriate to product specifications.</p> <p>P3: Operate meat smoker.</p>
CU7. Chill the meat products	<p>P1: Chill product immediately or cool at ambient temperature to a specified internal temperature before chilling according to product specifications.</p> <p>P2: Store product according to product specifications.</p> <p>P3: Stack the product according to product specifications and workplace requirements.</p>

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- function of various additives and ingredients
- meat curing/smoking process
- purpose and effect of brine/smoke on meat
- health regulations which apply to cure/smoke and corning of meats
- effects of curing/smoking on shelf life and taste of the product
- selection criteria for meat for the curing or smoking
- storage procedures for cured and smoked products.
- effect of moisture on casings
- procedures for cleaning processing equipment
- relevant communication and mathematical skills

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- prepare brine for curing
- apply brine/salting to meat cuts
- apply smoking to meat products

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Automatic injector machine (Injectomat)
2	Massagers
3	Pumping equipment
4	Smoke generator
5	Smoke jet
6	Brine tanks
7	Chiller
8	Wooden boxes

CS-33: Prepare Different Types Of Cheese**Overview**

This competency standard covers the skills and knowledge required to run curd making and cutting process, molding, and pressing and cheese making. The trainees will be able to enhance skills for the production of various types of cheeses.

Competency units	Performance criteria
CU1. Check/analyze quality of raw milk	P1: Perform quality control tests of milk P2: Determine Fat%, P3: Determine SNF P4: Determine LR P5: Check temperature of storage tank/chiller
CU2. Pasteurization of milk	P4: Check pasteurizer to confirm readiness for use P5: Set time and temperature for pasteurization P1: Operate pasteurizer to meet production as per standard requirements
CU3. Inoculate culture	P1: Select proper type of culture P2: Check quantity/dosage of culture P3: Check storage temperature
CU4. Perform addition of rennet	P1: Apply rennet for curdling of milk P2: Monitor pH change in coagulum P3: Ensure proper dosage of calcium chloride (CaCl ₂)
CU5. Monitor curd production and cutting process	P1: Ensure curdling of milk P2: Start cutting process according to company specifications
CU6. Operate pressing and molding machine	P1: Determine acidity and pH to assess proper time to press P2: Operate pressing vats for whey separation P3: Ensure that pressing and molding process is set to meet production requirements
CU7. Monitor	P1: Check equipment to confirm operating condition

pressing and moulding process	P2: Ensure the pressing and moulding process is started up according to company specifications P3: Operate moulding machines P4: Ensure pressed and the moulded product meets specifications
CU8. Apply salting of cheese	P1: Ensure salt dose according to formulation specifications P2: Perform salting/brining of cheese P3: Ensure pH and moisture
CU9. Ensure ripening of cheese	P1: Ensure temperature during aging P2: Check flavor development during aging P3: Check taste development P4: Check eyes development
CU10. Pack and store cheese	P4: Select appropriate packaging material P5: Operate packaging machine P6: Check storage temperature

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- purpose and basic principles of the curd production and cutting process
- relationship between the curd production and cutting process and other dairy processes
- stages and changes which occur during curd production
- methods used to coagulate milk for cheesemaking
- physical and chemical changes during curd production and cutting
- factors affecting curd firmness
- microbiological considerations in curd production
- effect of curd production and cutting process on the end product
- quality characteristics to be achieved in curd making
- process specifications, procedures, and operating parameters
- purpose and basic principles of the pressing and moulding process
- relationship between the pressing and molding process and other dairy processes

- stages and changes which occur during pressing and molding
- types of additives and ingredients during pressing and molding
- microbiological considerations during cheese making
- effect of pressing and molding process on the end product
- quality characteristics to be achieved in pressing and molding
- process specifications, procedures, and operating parameters
- significance and methods of monitoring control points within the pressing and moulding process

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Inoculate culture
- Check aging and ripening of cheese
- Perform sensory evaluation of cheese

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Milk analysis lab
2	Pasteurizer
3	Pilot cheese-making plant
4	Pressing and moulding machine

CS-34: Prepare Sugar**Overview**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of sugar making. This unit covers the competencies required to prepare for work, make sugar and carry out finishing work. It provides an introduction to the main practical and activities associated with sugar making.

Competency Units	Performance Criteria
CU1. Check juice extraction process	P1: Operate crusher P2: Operate presser P3: Check bagass separation from juice P4: Extract juice P5: Check sugar separation from stalks P6: Check brix of juice
CU2. Monitor clarification and evaporation	P1: Check lime P2: Heat lime P3: Check sedimentation of muds P4: Check filtration P5: Check moisture percentage of juice P6: Operate evaporater P7: Check brix and moisture of syrup
CU3. Perform crystallization	P1: Operate crystallization machine P2: Check grain size P3: Check seed size P4: Check massecuite in crystallizers P5: Operate centrifugal machine
CU4. Dry and pack sugar	P1: Operate sugar dryer P2: Operate screens vibrator to sort sugar crystals according to size P3: Select appropriate packaging and labeling material

	P4: Ensure storage at ambient conditions
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Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Define molasses
- Describe Evaporation
- Classification of syrups
- Brix determination
- Describe Mixing methods
- Juice purification

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Operate Centrifugal machine
- Determine brix

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Balance
2	Centrifugal machine
3	Filling machine
4	Packing machine
5	Refractometer
6	Moisture analyzer

CS-35: Prepare Extruded Products**Overview:**

This competency standard covers the skills and knowledge required to run extruder and preparing extruded products like macaroni, vermicelli, spaghetti, noodles and snack foods. The trainees will be able to enhance skills for the production of various types of extruded products.

Competency units	Performance criteria
1. Prepare extrusion ingredients	P1: Select ingredients for batch preparation as per standards P2: Ground ingredients to achieve consistency as per set quality standards for further processing P3: Check particle size of ground material
2. Mix extrusion ingredients	P1: Operate pre conditioner for mixing of ingredients P2: Ensure time and temperature during mixing P2: Add all ingredients and additives to form dough/mix (Extrudate) P3: check quality of extrudate as per organizational procedures
3. Perform extrusion	P1: Check extruder and its utilities before operation P2: Ensure cleaning of all accessories P3: Operate extruder P4: Check quality of extruded product as per specs P5: Report to in charge in case of non-conformance
4. Perform Frying	P1: Check fryer and its utilities before operation P2: Ensure cleaning of all accessories P3: Operate fryer P4: Check quality of fried extruded product as per specs P5: Report to incharge in case of non-conformance
5. Perform Drying	P1: Operate dryer P2: Check moisture contents in finished product as per specs.
6. Pack and store Extruded products	P1: Select appropriate packaging material P2: Operate packaging machine P3: Check storage temperature

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standard, which includes the knowledge of:

- Define pasta
- Describe extrusion technology
- Describe types of extruders
- Role of steam in extrusion
- Gelatinization of starch
- Caramelization
- Role of extrusion ingredients

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard:

- Operate extruder
- Check quality parameters of extrudate
- Perform sensory evaluation of extruded products
- Check quality of final product

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Extruder
2	Dies
3	Mixer
4	Wrapping machine
5	Moisture analyzer

CS-36: Produce confections**Overview:**

This competency unit covers the skills and required knowledge to demonstrate the understanding of the basic principles of confectionary production. This unit covers the competencies required to prepare for work, make confections and carry out finishing work. It provides an introduction to the main practical and activities associated with confectionary products.

Competency Units	Performance Criteria
CU1. Receive and store raw materials as per manufacturing order	P1: Inspect raw material as per quality standards P2: Store raw materials at appropriate condition
CU2. Mix ingredients as per standard recipe	P1: Perform melting of sugar and butter together P2: Ensure consistency of mix by stirring P3: Check brix and viscosity
CU3. Perform cooking of batch	P1: Produce syrups of required brix P2: Ensure addition of all additives P3: Maintain temperature according to standards P4: Check bubbles of mix
CU4. Perform rolling and moulding	P1: Operate rolling machine to produce sheet of uniform size P2: Operate moulder/shaping machine
CU5. Prepare chocolate confection	P1: Mix ingredients and additives P2: Temper the mixture P3: Operate moulder/sheeter
CU6. Prepare gums	P1: Mix ingredients and additives P2: Operate moulder/shaping machine P3: Check gum elasticity
CU7. Perform wrapping and packaging	P1: Select appropriate packaging material P2: Operate wrapping machine

	P3: Ensure bulk packaging
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Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Differentiate between toffees and candies
- Define gums
- Define caramalization
- Define crystallization
- Describe Evaporation
- Classification of syrups
- Brix determination

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence (s) to be competent in this competency standard

- Prepare confection as per availability of materials
- Operate wrapping machine
- Determine brix

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Balance
2	Wrapping machine
3	Rolling machine
4	Packing machine
5	Refractometer
6	Moulder

CS-37: Ensure Quality Control in Food Industry**Overview:**

This competency unit covers the skills and required knowledge to demonstrate the understanding of Quality Control in food industry. It provides an introduction to the main theories and activities associated with food production technology being applied in the food industry.

Competency Units	Performance Criteria
CU1. Check the quality of raw material	P1: Check the quality of raw material as per specification P2: Keep record of raw materials P3: Enlist raw material used for production P4: Perform physical, chemical and microbiological analysis
CU2. Check Lab testing equipment	P1: Ensure all lab equipment in a well-maintained condition P2: Make sure in time calibration of all equipment
CU3. Prepare product according to specifications	P1: Apply standard procedures to make food products P2: Perform analysis at each step of product preparation
CU4. Perform Sensory evaluation of the product	P1: Conduct sensory evaluation as per standard P2: Analyze and interpret sensory evaluation results
CU5. Carry out Preventive measures	P1: Make sure the preventive maintenance schedule is followed P2: Keep a record of each maintenance
CU6. Check the quality of the final product	P1: Perform random sampling from the final product P2: Check the frequency of sampling as per SOP P3: Complete final product analysis record P4: Ensure the traceability of each batch

Understanding and Knowledge:

The trainee must be able to demonstrate knowledge and understanding required to carry out tasks covered in this competency standards which includes the knowledge of:

- Personal hygiene
- Cleaning and sanitation
- QC testing

Critical Evidence (s) required:

The trainee needs to produce the following critical evidence(s) to be competent in this competency standard

- Perform CIP
- Conduct sensory evaluation

Tools & Equipment required:

Sr. No	DESCRIPTION
1	Refractometer
2	pH meter
3	Chemicals for lab testing
4	Hydrometer
5	Balance
6	Densitometer

B. DIGITAL SKILLS

CS-1: Operate Digital Media Technology

Overview:

This unit describes the performance outcomes, skills, and knowledge required to identify, select, and use a digital media package and supporting technologies.

Competency Unit	Performance Criteria
CU1. Use appropriate OHS office work practices	<p>P1: Use safe work practices to ensure ergonomic, work organization, energy and resource conservation requirements are addressed</p> <p>P2: Use wrist rests and document holders where appropriate</p> <p>P3: Use monitor anti-glare and radiation reduction screens where appropriate</p>
CU2. Identify and select appropriate digital media package	<p>P1: Identify the basic requirements of a design brief, including user environment</p> <p>P2: Research and review suitable available digital media packages</p> <p>P3: Select an appropriate digital media package to meet design brief requirements</p>
CU3. Use digital media package	<p>P1: Procure or create suitable data to meet the requirements of the brief</p> <p>P2: Manipulate data using digital media package tools</p> <p>P3: Ensure naming and storing of documents in the appropriate file format in directories or folders</p>
CU4. Review digital media design	<p>P1: Evaluate design for creative, dramatic and</p>

	<p>technical quality, file size, and suitability to meet the brief</p> <p>P2: Test and run any incorporated graphics, video or sound as part of a digital media presentation and present designs in the appropriate format</p> <p>P3: Review final product against the design brief</p>
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Basic principles of visual design
- Functions and features of digital media packages and technologies
- Graphic design and stylistic language conventions
- OHS principles and responsibilities for ergonomics, such as work periods and breaks
- Principles of digital imaging and file formats, video and sound file formats, file management and transfer systems
- Vendor product directions in digital media hardware and software
- Visualization and interpreting creative information, scripts (text) and images

Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to identify, select, and use a digital media package and supporting technologies. The evidence should integrate employability skills with workplace tasks and job roles and verify competency can be transferred to other circumstances and environments.

Demonstrated evidence of the ability to:

- Identify the basic requirements of a design brief
- Use digital media package to meet organizational requirements

- Use OHS principles and responsibilities for ergonomics, such as work periods and breaks
- Use help manuals and online help when appropriate
- Use digital media technologies to support design brief requirements.

CS-2: Create User Documentation**Overview:**

This unit describes the performance outcomes, skills, and knowledge required to create user documentation that is clear to the target audience and easy to navigate.

Unit of Competency	Performance Criteria
CU1. Determine documentation standards and requirements	<p>P1: Determine documentation requirements</p> <p>P2: Investigate documentation and industry standards for requirements and determine the appropriate application to user documentation</p> <p>P3: Design documentation templates using appropriate software and obtain approval from an appropriate person</p>
CU2. Produce user documentation	<p>P1: Conduct a review of the subject system, program, network or application to understand its functionality</p> <p>P2: Gather existing technical, design or user specifications and supporting documentation</p> <p>P3: Create user documentation based on a template to record the operation of the subject system, program, network or application</p>
CU3. Review and obtain sign-off	<p>P1: Submit user documentation to the target audience for review</p> <p>P2: Gather and analyze feedback</p> <p>P3: Make changes to user documentation</p> <p>P4: Submit user documentation to the appropriate person for approval</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Content features, including clarity and readability
- Document design, web design, and usability
- Functions and features of templates and style guides
- Instructional design principles

Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to create user documentation that is clear to the target audience and easy to navigate. The evidence should integrate employability skills with workplace tasks and job roles and verify competency can be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to create user documentation that:

- Meets business requirements
- Caters for a diverse readership
- Is clear to the target audience
- Is easy to navigate.

CS-3: Create Technical Documentation**Overview:**

This unit describes the performance outcomes, skills, and knowledge required to create technical documentation that is clear to the target audience and easy to navigate.

Unit of Competency	Performance Criteria
CU1. Identify and analyze documentation requirements and client needs	<p>P1: Consult with client to identify documentation requirements</p> <p>P2: Interpret and evaluate documentation requirements and confirm details with the client</p> <p>P3: Investigate industry and documentation standards for requirements</p> <p>P4: Define and document the scope of work to be produced</p> <p>P5: Consult with client to validate and confirm the scope of work</p>
CU2. Design documentation	<p>P1: Identify information requirements with reference to layout and document structure</p> <p>P2: Create document templates and style guides consistent with information requirements</p> <p>P3: Conduct a review of the system in order to understand its functionality</p> <p>P4: Extract content that meets information requirements according to copyright restrictions</p> <p>P5: Develop the structure of the technical documentation giving focus to the flow of information, style, tone and content format</p> <p>P6: Validate the technical documentation structure with the client</p>
CU3. Develop documentation	<p>P1: Write technical documentation based on the template and scope of work using the information gathered</p>

	<p>P2: Translate technical terminology into plain English where appropriate</p> <p>P3: Apply content format and style according to documentation standards and templates</p>
CU4. Evaluate and edit documentation	<p>P1: Submit technical documentation to the appropriate person for review</p> <p>P2: Gather and analyze feedback</p> <p>P3: Incorporate alterations into the technical documentation</p> <p>P4: Edit the technical documentation for technical and grammatical accuracy</p>
CU5. Prepare documentation for publication	<p>P1: Check that the completed technical documentation meets client requirements and scope of work</p> <p>P2: Submit the technical documentation to the appropriate person for approval</p> <p>P3: Prepare the technical documentation for publication and distribution using appropriate channels</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Content features, such as clarity and readability
- Document design, web design, and usability
- Functions and features of templates and style guides
- Instructional design principles
- Organizational policies, procedures, and standards that cover document design.

Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to create technical documentation that is clear to the target audience and easy to navigate. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- Establish customer needs
- Design and develop technical documentation, such as system, procedures, training material and user guides, incorporating appropriate standards
- Update document with client feedback
- Prepare documentation for publication.

CS-4: Use Social Media Tools For Collaboration And Engagement**Overview:**

This unit describes the performance outcomes, skills, and knowledge required to establish a social networking presence using social media tools and applications. The unit specifically identifies the requirement to review, compare, and use different types of social networking tools and applications.

Unit of Competency	Performance Criteria
CU1. Describe different types of social media tools and applications	<p>P1: Explain the characteristics of the term social media</p> <p>P2: Identify different types of social media tools and applications</p> <p>P3: Illustrate some of the issues associated with the use of social media tools and applications</p>
CU2. Compare different types of social media tools and applications	<p>P1: Select one social media type for Review</p> <p>P2: Review the most popular tools and applications within that social media type</p> <p>P3: Itemize benefits across a range of the most popular tools and applications</p> <p>P4: Select the most appropriate social media tool or application</p>
CU3. Set up and use popular social media tools and applications	<p>P1: Identify social media tools and applications for possible implementation</p> <p>P2: Initiate preferred social media tools and applications for use</p> <p>P3: Establish social media interface using text and file content</p> <p>P4: Initiate social networking interaction</p> <p>P5: Test and evaluate tools and applications for ease of use</p> <p>P6: Present findings</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Basic technical terminology in relation to social networking and social media applications and tools
- Basic knowledge of uploading images, text files, pdf files, audio files, video files and link associated files
- Features and functions of social media applications
- Import and export software functions
- Linking documents
- OHS principles and responsibilities for ergonomics, including work periods and breaks
- Tagging to facilitate collaborative folksonomy
- Social media applications and procedures for connecting to social networking sites
- Use of input and output devices
- Use of RSS feeds to connect a social network.

Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to create technical documentation that is clear to the target audience and easy to navigate. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- Establish customer needs
- Design and develop technical documentation, such as system, procedures, training material and user guides, incorporating appropriate standards

CS-5: E-Commerce – SEO (Search Engine Optimization)**Overview:**

This competency unit covers to develop efficient E-Marketing strategies in accordance with the Vision and Mission statement of the organization driven by Electronic means.

Unit of Competency	Performance Criteria
CU1. SEO (Search Engine Optimization)	<p>P1: Apply SEO techniques</p> <p>P2: Employ SEO keywords</p> <p>P3: Demonstrate SEO techniques to priorities their site or web application using automated tools</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- SEO Methods including but not limited to Getting Indexed, Preventing Crawling, and Increasing Prominence.
- White-hat, Black-hat SEO techniques for web application
- SEO keywords for web pages' translation.

Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to write and edit copy that is clear to the target audience and easy to navigate. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

CS-6: E-Commerce – SCM (Supply Chain Management)**Overview:**

This competency unit covers to develop efficient E-Marketing strategies in accordance with the Vision and Mission statement of the organization driven by Electronic means.

Unit of Competency	Performance Criteria
CU1. SCM (Supply Chain Management)	<p>P1: Identity potential Suppliers</p> <p>P2: Select the appropriate supplier Place order as per requirement/inventory</p> <p>P3: Inspect received order</p> <p>P4: Maintain Inventory as per Inventory Control/store keeping techniques</p> <p>P5: Identity of different available transportation mode</p> <p>P6: Identify steps of reverse SCM i.e. from consumer to organization</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Procurement Cycle (Launch of RFP/RFQ, Tender, Bidding, Comparative Statement, Award of Contract, Maintenance)
- Different techniques to manage
- Product delivery and their traceability
- Incorporation of Outsourcing in logistics.
- Electronic Data Interchange methodologies and format

Critical Evidence(s) Required

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to write and edit copy that is clear to the target audience and easy to navigate. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

CS-7: E-Commerce – Social Media Marketing**Overview:**

This competency unit covers to develop efficient E-Marketing strategies in accordance with the Vision and Mission statement of the organization driven by Electronic means.

Unit of Competency	Performance Criteria
CU1. Social Media Marketing	<p>P1: Identify different Social media marketing techniques</p> <p>P2: Apply suitable Classified Advertisement techniques on social media</p> <p>P3: Perform Electronic Mail Marketing</p> <p>P4: Create Blogs</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

Describe Knowledge of different social media sites that is Facebook, Twitter, LinkedIn, Google+, etc., Comparative Statement, Award of Contract, Maintenance)

- Brand pages' creation on social media sites.
- The familiarity of banner ads integration on different web sites like newspaper sites in any demographic region.
- Skills to regularly update brand/product/service blogs.
- Electronic Data Interchange methodologies and format
- Direct marketing techniques e.g. Email, SMS (Mobile- Commerce) for the projection of company newsletters

Critical Evidence(s) Required

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to implement e-marketing strategies that is clear to the target audience and easy to navigate. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

C. SOFT SKILLS**CS-1: Manage Meetings****Overview**

This unit describes the skills and knowledge required to manage a range of meetings including overseeing the meeting preparation processes, chairing meetings, organizing the minutes, and reporting meeting outcomes. It applies to individuals employed in a range of work environments who are required to organize and manage meetings within their workplace, including conducting or managing administrative tasks in providing agendas and meeting material. They may work as senior administrative staff or may be individuals with responsibility for conducting and chairing meetings in the workplace.

Unit of Competency	Performance Criteria
CU1. Prepare for meetings	<p>P1: Develop an agenda in line with the stated meeting purpose</p> <p>P2: Ensure the style and structure of the meeting are appropriate to its purpose</p> <p>P3: Identify meeting participants and notify them in accordance with organizational procedures</p> <p>P4: Confirm meeting arrangements in accordance with the requirements of meeting</p>
CU2. Conduct meetings	<p>P1: Chair meetings in accordance with organizational requirements agreed conventions for the type of meeting and legal and ethical requirements</p> <p>P2: Conduct meetings to ensure they are focused, time-efficient and achieve the required outcomes</p> <p>P3: Ensure meeting facilitation enables participation, discussion, problem-solving and resolution of issues</p> <p>P4: Brief minute-taker on method for recording meeting minutes in accordance with organizational</p>

	requirements and conventions for the type of meeting
CU3. Follow up meetings	<p>P1: Check transcribed meeting notes to ensure they reflect a true and accurate record of the meeting and are formatted in accordance with organizational procedures and meeting conventions</p> <p>P2: Distribute and store minutes and other follow-up documentation within designated timelines, and according to organizational requirements</p> <p>P3: Report outcomes of meetings as required, within designated timelines</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Outline meeting terminology, structures, arrangements
- Outline the responsibilities of the chairperson and explain group dynamics in relation to managing meetings
- Describe options for meetings including In-person/physical, teleconferencing, web-conferencing and using webcams
- Identify the relevant organizational procedures and policies regarding meetings, chairing, and minutes including identifying organizational formats for minutes and agendas.

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to manage meetings. The evidence should integrate employability skills with workplace

tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- apply conventions and procedures for formal and informal meetings including:
 - developing and distributing agendas and working papers
 - identifying and inviting relevant meeting participants
 - organizing and confirming meeting arrangements
 - running the meeting and following up
- organize, take part in and chair a meeting
- record and store meeting documentation
- Follow organizational policies and procedures

CS-2: Manage Workforce Planning**Overview:**

This unit describes the skills and knowledge required to manage planning in relation to an organization's workforce including researching requirements, developing objectives and strategies, implementing initiatives, and monitoring and evaluating trends. It applies to individuals who are human resource managers or staff members with a role in a policy or planning unit that focuses on workforce planning.

Unit of Competency	Performance Criteria
CU1. Identify workforce	<p>P1: Review current data on staff turnover and demographics</p> <p>P2: Assess factors that may affect workforce supply</p> <p>P3: Develop the organization's requirement for a skilled workforce</p>
CU2. Develop workforce objectives and strategies	<p>P1: Review organizational strategy and establish aligned objectives for modification</p> <p>P2: Prepare strategies to address unacceptable staff turnover, if required</p> <p>P3: Define objectives to retain required skilled labor</p> <p>P4: Define objectives for workforce diversity and cross-cultural management</p> <p>P5: Obtain agreement and endorsement for objectives and establish targets</p> <p>P6: Develop contingency plans to cope with extreme situations</p>
CU3. Implement initiatives to support workforce planning objectives	<p>P1: Implement action to support agreed objectives for recruitment, training, redeployment, and redundancy</p> <p>P2: Develop and implement strategies to assist the workforce to deal with organizational dynamics</p> <p>P3: Implement succession planning model to ensure</p>

	<p>desirable workers are developed and retained</p> <p>P4: Implement programs to ensure the workplace is an employer of choice</p>
CU4. Monitor and evaluate workforce trends	<p>P1: Evaluate workforce plan against patterns in exiting employee and workforce changes</p> <p>P2: Monitor labor supply trends for areas of high turnover in the external environment</p> <p>P3: Monitor effects of labor trends on demand for labor</p> <p>P4: Survey organizational climate to gauge worker satisfaction</p> <p>P5: Refine objectives and strategies in response to national and international changes and make recommendations in response to global trends.</p> <p>P6: Regularly review government policy on labor jobs according to labor rights.</p> <p>P7: Evaluate the effectiveness of change processes against agreed objectives</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Explain current information about external labor supply relevant to the specific industry or skill requirements of the organization
- Outline industrial relations relevant to the specific industry
- Describe labor force analysis and forecasting skills

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in the department must be able to provide evidence of the ability to manage workforce planning. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- Review and interpret information from a range of internal and external sources to identify:
 - current staff turnover and demographics
 - labor supply trends factors that may affect workforce supply
 - organization's workforce requirements objectives and strategies
- Manage workforce planning including developing, implementing, monitoring and reviewing strategies to meet workforce needs
- Review relevant trends and supply and demand factors that will impact on an organization's workforce
- Develop a workforce plan that includes relevant research and specific strategies to ensure access to a skilled and diverse workforce.

CS-3: Undertake Project Work**Overview:**

This unit describes the skills and knowledge required to undertake a straightforward business or a section of a larger business. It covers developing a business plan, administering and monitoring the project, finalizing the business project, and reviewing the project to identify lessons learned for application to future projects. This unit applies to individuals who play a significant role in ensuring a business meets timelines, quality standards, budgetary limits, and other requirements set for the project.

Unit of Competency	Performance Criteria
CU1. Define business	<p>P1: Assess the business scope and other relevant documentation</p> <p>P2: Identify business stakeholders</p> <p>P3: Seek clarification of discrepancies from delegating authority related to project and project parameters</p> <p>P4: Determine and access available resources to undertake business</p>
CU2. Develop a business plan	<p>P1: Develop business feasibility report</p> <p>P2: Develop a business plan in line with the business project parameters</p> <p>P3: Develop and approve a business budget</p> <p>P4: Formulate a risk management plan for the project, including Workplace Health and Safety (WHS)</p>
CU3. Administer and monitor business	<p>P1: Ensure business team members are clear about their responsibilities and the project requirements</p> <p>P2: Ensure outcomes and documented timelines of the business are met</p> <p>P3: Maintain required recordkeeping systems throughout the business</p> <p>P4: Implement and monitor plans of project finances and</p>

	<p>resources</p> <p>P5: Prepare project progress reports as required to stakeholders</p> <p>P6: Monitor risk management as required to ensure business outcomes are met</p>
CU4. Finalize the project	<p>P1: Complete financial recordkeeping associated with business for audit</p> <p>P2: Maintain proper record of unused items during project</p> <p>P3: Complete project documentation and obtain necessary sign-offs for concluding business project</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Give examples of project management tools and how they contribute to a business
- Outline types of documents and other sources of information commonly used in defining the parameters of a business
 - Explain processes for identifying and managing risk in a business
 - Explain the organization's procedures and processes that are relevant to managing a business including:
 - lines of authority and approvals
 - quality assurance
 - human resources
 - budgets and finance
 - recordkeeping
 - reporting
- Outline the legislative and regulatory context of the organization in relation to business project work, including workplace health and safety (WHS) requirements.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to undertake project work. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- define the parameters of the business including:
 - business scope
 - business stakeholders
 - relationship of project to organizational objectives
 - reporting requirements
 - resource requirements
- use project management tools to develop and implement a business plan including:
 - deliverables
 - work breakdown
 - budget and allocation of resources
 - timelines
 - risk management
 - recordkeeping and reporting
- consult and communicate with relevant stakeholders to generate input and engagement in planning, implementing and reviewing the project
- provide support to team members to enable them to achieve deliverables and to transition them as appropriate at completion of the project
- finalize the business including documentation and reporting
- review and document the business outcomes

CS-4: Identify And Communicate Trends In Career Development**Overview:**

This unit describes the skills and knowledge required to conduct research to identify and communicate career trends. It establishes the need to interact professionally with others in assessing career needs, to effectively assist clients identify competencies they require for a career and employability in a given context. It also examines how to maintain quality of career development services and professional practice. It applies to individuals seeking to identify and communicate trends in career development.

Unit of Competency	Performance Criteria
CU1. Research and explore career trends	<p>P1: Apply knowledge of changing organizational structures, lifespan of careers and methods of conducting work search, recruitment and selection processes</p> <p>P2: Analyze changing worker and employer issues, rights and responsibilities in context of changing work practices</p> <p>P3: Examine importance of quality careers development services</p> <p>P4: Maintain all research, documentation, sources and references (digital or physical).</p> <p>P5: Analyze implications of relevant policy, legislation, professional codes of practice and national standards relating to worker and employer issues</p> <p>P6: Confirm employability skills and preferences that may open employment options in other career pathways</p>
CU2. Assess and confirm ongoing career development	<p>P1: Assess success of previous career development services</p> <p>P2: Maintain privacy and security of all data, research and personal records according to relevant policy</p>

	P3: Establish existing work-life balance and friendly environment
CU3. Maintain quality of career development services and professional practice	P1: Analyze and review relevance of career theories, models, frameworks and SOPs P2: Incorporate into career development services and professional practice P3: Comply with all relevant policies

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Diversity and its potential effects on career choices
- Outline human psychological development and needs in relation to career development
- Outline relevant policy, legislation, codes of practice and standards relevant to career development
- Explain recruitment and selection processes in the context of career development services
- Describe a range of data gathering and research techniques
- Explain techniques used to analyze trends.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to identify and communicate trends in career development. The evidence should integrate

employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- research and analyze current economic, labor market, employment, career and vocational educational and training trends
- identify choices and career development needs for individuals within a given context
- report and document management of research and career development materials
- Comply with all relevant local, state/territory and national legislation, policies and practices.

CS-5: Apply Interpersonal Skills**Overview:**

This unit describes the skills and knowledge required to use advanced and specialized communication skills in the client-counselor relationship. This unit applies to individuals whose job role involves working with clients on personal and psychological issues within established policies, procedures and guidelines.

Unit of Competency	Performance Criteria
CU1. Communicate effectively	<p>P1: Identify communication barriers and use strategies to overcome these barriers in the client-counselor relationship</p> <p>P2: Facilitate the client-counselor relationship through selection and use of micro skills</p> <p>P3: Observe and respond to non-verbal communication cues</p> <p>P4: Integrate case note taking with minimum distraction</p>
CU2. Use specialized counseling interviewing skills	<p>P1: Select and use communication skills according to the sequence of a counseling interview</p> <p>P2: Identify points at which specialized counseling interviewing skills are appropriate for inclusion</p> <p>P3: Use specialized counseling communication techniques based on their impacts and potential to enhance client development and growth</p> <p>P4: Identify and respond appropriately to strong client emotional reactions</p>
CU3. Evaluate own communication	<p>P1: Reflect on and evaluate own communication with clients</p> <p>P2: Recognize the effect of own values and beliefs on communication with clients</p> <p>P3: Identify and respond to the need for development of</p>

	own skills and knowledge
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Legal and ethical considerations for communication in counseling practice, and how these are applied in individual practice:
 - codes of conduct/practice
 - discrimination
 - human rights
 - practitioner/client boundaries
 - privacy, confidentiality and disclosure
 - rights and responsibilities of workers, employers and clients
 - work role boundaries responsibilities and limitations of the counselor role
 - workplace health and safety
- Communication techniques and micro-skills including:
 - attending behaviors active listening, reflection of content feeling, summarizing
 - questioning skills open, closed, simple and compound questions
 - client observation skills
 - noting and reflecting skills
 - providing client feedback
- Components of the communication process including:
 - encoder
 - decoder
- Primary factors that impact on the communication process including:
 - context
 - participants
 - rules

- messages
 - channels
 - noise
 - feedback
- Communication barriers and resolution strategies, including:
 - environmental
 - physical
 - individual perceptions
 - cultural issues
 - language
 - age issues
 - disability
- Observational techniques including:
 - facial expressions
 - non-verbal behavior
 - posture
 - silence
- Ways including:
 - visual in which different people absorb information
 - auditory
 - kinesthetic
- Impacts of trauma and stress on the communication process, including on:
 - concentration and attention
 - memory
 - Intelligence
 - use of verbal and written language
 - use of body language
 - challenging within the counseling session
- Self-evaluation practices, including:
 - how to recognize own biases
 - Impact of own values on the counseling relationship.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to apply specialist interpersonal and counseling interview skills. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- interviewed at least 3 different clients using specialized interpersonal communication and counseling interviewing skills, including:
- micro-skills and communication techniques, including:
 - attending behaviors active listening,
 - reflection of content, summarizing
 - questioning skills open, closed, simple and compound questions
 - client observation skills
 - noting and reflecting skills
 - providing client feedback
- specialized counseling interviewing skills, including:
 - challenging
 - reframing
 - focusing
- integrated clear case note taking into the interview process
- Completed a structured process of self-reflection and evaluation of own communication used during the 3 interviews.

CS-6: Maintain Work Safely In Office Environment**Overview:**

This unit describes the performance outcomes, skills and knowledge required to participate in workplace occupational health and safety (OHS) processes to protect workers own health and safety, and that of others.

Unit of Competency	Performance Criteria
CU1. Work safely	P1: Follow established safety procedures when conducting P2: Work P3: Carry out pre-start systems and equipment checks in P4: accordance with workplace procedures
CU2. Implement workplace safety requirements	P1: Identify designated persons for reporting queries and concerns about safety in the workplace P2: Identify existing and potential hazards in the workplace, report them to designated persons and record them in accordance with workplace procedures P3: Identify and implement workplace procedures and work instructions for controlling risks P4: Report emergency incidents and injuries to designated persons P5: Maintain emergency contact list
CU3. Participate in OHS consultative processes	P1: Contribute to workplace meetings, inspections or other consultative activities P2: Raise OHS issues with designated persons in accordance with organizational procedures P3: Take actions to eliminate workplace hazards or to reduce risks
CU4. Follow safety procedures	P1: Identify and report emergency incidents P2: Follow organizational procedures for responding to

	<p>emergency incidents</p> <p>P3: Check safety tools</p>
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Explain responsibilities of employers and employees under relevant health and safety regulation
- Describe emergency procedures including procedures for fires, accidents and evacuation
- Outline commonly used hazard signs and safety symbols.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to participate in workplace OHS processes. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Assessment must ensure the safety processes; hazards and risk are relevant to the area of work. Evidence of the following is essential:

- Accurately following all relevant safety procedures
- Identifying and reporting hazards to designated personnel
- Knowledge of relevant health and safety regulations
- Knowledge of relevant materials, equipment and work processes.

CS-7: Develop Workplace Documents**Overview:**

This unit covers interpreting and composing a range of workplace documents from a number of sources. It includes interpreting written information for workplace purposes as well as planning, drafting and reviewing a basic document before writing the final version. The focus is on the content and structure of written materials and not on the use of computer technology

Unit of Competency	Performance Criteria
CU1. Interpret written information	<p>P1: Read workplace materials to identify the subject and key information for using or reporting to others.</p> <p>P2: Read procedural manuals and codes of practice to locate specific information to carry out work functions in accordance with policy and standards.</p> <p>P3: Read a range of written materials to locate and select required information for summaries, short reports and response to requests.</p> <p>P4: Identify the cultural context and prior knowledge required to interpret workplace information and obtain assistance when required.</p> <p>P5: Determine candidate and purpose for the document</p> <p>P6: Seek assistance with interpretation of complex materials in accordance with organizational procedures.</p>
CU2. Develop written materials	<p>P1: Identify and comply with established requirements for a range of written materials</p> <p>P2: Determine format and structure</p> <p>P3: Identify organizational requirements</p> <p>P4: Establish method of communication</p> <p>P5: Develop introductory guide for incumbents</p>
CU3. Draft document	<p>P1: Develop draft document to communicate key points</p>

	P2: Obtain and include any required additional information
CU4. Review document	P1: Check draft for suitability of tone for audience, purpose, format and communication style P2: Check draft for readability, grammar, spelling, sentence and paragraph construction and correct any inaccuracies or gaps in content. P3: Check draft for sequencing and structure P4: Check draft to ensure it meets organizational requirements P5: Ensure draft is proofread, where appropriate, by supervisor or colleague
CU5. Write final document	P1: Make and proofread necessary changes P2: Ensure document is sent to intended recipient within required time frames P3: File copy of document in accordance with organizational policies and procedures

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Reading and writing procedures at a level to cope with a range of workplace materials
- Integration of information from a number of sources in order to generate meaning
- Ways to write and sequence paragraphs according to the required purpose of written material
- Outline the linking ideas in written material through selection and use of words, grammatical structures, headings and punctuation appropriate to the purpose
- Spelling, punctuation and grammar for workplace documents at an experienced level
- Response to diversity, including gender and disability

- Implementation of ergonomic requirements for office work
- Environmental policies such as those relating to paper use/wastage/recycling
- Preparation of general information and papers according to target audience
- Problem solving skills to determine document design and production processes
- Usage of resources to assist in document production, such as dictionary, thesaurus, templates, style sheets
- Ways to produce business letters, memos, job applications, resumes, meeting agendas and minutes
- Ways to handle courier/postal services

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to interpret written information for workplace purposes and plan, draft and review a basic document before writing the final version. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Evidence of the following is essential:

- Producing a range of documents that accurately convey required information including single and multipage business letters, memos, job applications, resumes, meeting agendas and minutes.
- Knowledge of organizational policies and procedures for document production

CS-8: Maintain Professionalism In Workplace**Overview:**

This unit of competency describes the outcomes required maintain a professional image in the workplace, including behaving ethically, demonstrating motivation, respecting timeframes and maintaining personal appearance.

Unit of Competency	Performance Criteria
CU1. Respect work timeframes	<p>P1: Demonstrate punctuality in meeting, set working hours and times.</p> <p>P2: Utilize working hours only for working and follow company regulations.</p> <p>P3: Complete work tasks within deadlines according to order of priority</p> <p>P4: Perform extra ordinary during working hours</p>
CU2. Maintain personal appearance and hygiene	<p>P1: Clean hair, body and nails regularly</p> <p>P2: Wear suitable cloths for the workplace, and respect local and cultural contexts</p> <p>P3: Meet specific company dress code requirements</p> <p>P4: Keep smiling and have positive body language during working hours</p>
CU3. Maintain adequate distance with colleagues and clients	<p>P1: Respect personal space of colleagues and clients with reference to local customs and cultural contexts.</p> <p>P2: Avoid cross transmission of infections (especially through respiration).</p>
CU4. Work in an ethical manner	<p>P1: Follow company values/ethics codes of ethics and/or conduct, policies and guidelines.</p> <p>P2: Use company resources in accordance with company ethical standards.</p> <p>P3: Undertake work practices in compliance with company ethical standards, organizational policy and guidelines.</p>

	<p>P4: Instruct co-workers on ethical, lawful and reasonable directives.</p> <p>P5: Share Company values/practices with co-workers using appropriate behavior and language.</p> <p>P6: Report work incidents/situations and/or resolved in accordance with company protocol/guidelines.</p>
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Application of good manners and right conduct
- Basic practices for oral and personal hygiene
- Common products used for oral and personal hygiene
- Outline the company code of conduct/values
- Outline the Company regulations, performance and ethical standards
- Work responsibilities/job functions
- Communication skills
- Workplace hygiene standards

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to maintain professionalism in the workplace. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Evidence of the following is essential:

- clarify and affirm work values/ethics/concepts consistently in the workplace;
- comply with required working times;
- conduct work practices satisfactorily and consistently, in compliance with work ethical standards, organizational policy and guidelines;
- Keep adequate distance while interacting with colleagues and clients.

D. ENTREPRENEURSHIP SKILLS**CS-1: Develop Entrepreneurial Skills****Overview:**

This Competency Standard identifies the competencies required to develop entrepreneurial skills by food supervisor, in accordance with the organization's approved guidelines and procedures. You will be expected to develop a business plan, collect information regarding revenue generation, develop a marketing plan, and develop basic business communication skills. Your underpinning knowledge regarding entrepreneurial skills will be sufficient to provide you the basis for your work.

Unit of Competency	Performance Criteria
CU1. Develop a business plan	<p>P1: Conduct a market survey to collect the following information</p> <ul style="list-style-type: none"> • Business Model • Financials • Equipment Estimation • Revenue Generation Sources • Marketing strategy • Market Trends • Overall Expenses <p>P1: Select the best option in terms of cost, service, quality, sales, operational expenses</p> <p>P2: Compile the information collected through the market survey, in the business plan format</p>
CU2. Develop a food marketing plan	<p>P1: Make a marketing plan for the service products, price, placement, promotion, people, packaging and positioning</p> <p>P2: Include the information of marketing plan in the business plan</p>

CU3. Develop basic business communication skills	P1: Communicate with different people using effective communication skills like different modes of communication to communicate effectively e.g.: presentation, speaking, writing, listening, visual representation, reading, etc. P2: Use specific business terms used in the market
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- 7Ps of marketing including product, price, placement, promotion, people, packaging and positioning
- 7Cs of business communication
- Different modes of communication and their application in the food industry
- Specific business terms used in the food industry
- Available funding sources
- Low-interest loans to start a new business
- Market survey and its tools e.g: questionnaire, interview, observation, etc
- Market trends for a specific product offering
- State the main elements of a business plan
- Business plan format

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

- List 7Ps
- List 7Cs

CS-2: Apply information management and communications techniques**Overview:**

This unit describes the skills and knowledge required to provide a critical link between people, ideas, and information at all stages in the food business life cycle. It involves assisting the business team to plan communications and reviewing communications. It applies to individuals who are food practitioners working in a business support role.

Unit of Competency	Performance Criteria
CU1. Contribute to communications planning	<p>P1: Identify, source and contribute relevant information requirements to initial food business documentation</p> <p>P2: Contribute to developing and implementing the communications plan and communications networks</p>
CU2. Conduct information-management activities CU3.	<p>P1: Act on and process project information according to agreed procedures as directed, to aid decision-making processes throughout the business life cycle</p> <p>P2: Maintain information to ensure data is secure and auditable</p>
CU4. Communicate food business information	<p>P1: Communicate with clients and other stakeholders to ensure the flow of necessary information</p> <p>P2: Ensure reports are prepared and released according to authorization, or produced for release by others</p>
CU5. Contribute to assessing the effectiveness of communication	<p>P1: Assist in the ongoing review of business outcomes to determine the effectiveness of communications-management activities</p> <p>P2: Report communications-management issues and responses to higher business authorities for the application of lessons learned to future projects</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Summarize models and methods of communications management in the context of the business life cycle and other management functions
- Importance of managing risk by treating information securely
- Methods of reviewing outcomes
- Organizational policies and procedures are relevant to this role in a specific context.

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to apply business information management and communications techniques. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

CS-3: Apply Business Human Resources Management**Overview:**

This unit describes the skills and knowledge required to assist with aspects of human resources management of a business. It involves establishing human resource requirements, identifying the learning and development needs of people working on the project, facilitating these needs being met, and resolving conflict in the team. It applies to individuals who are business practitioners working in a business support role.

Unit of Competency	Performance Criteria
CU1. Assist in determining human resource requirements	<p>P1: Analyze the work breakdown structure to determine human resource requirements</p> <p>P2: Prepare a skills analysis of business personnel against task requirements</p> <p>P3: Assist in assigning responsibilities for achieving business deliverables</p>
CU2. Contribute to establishing and maintaining productive team relationships	<p>P1: Actively seek views and opinions of team members during task planning and implementation</p> <p>P2: Promote cooperation and effective activities, goals, and relationships within the team</p> <p>P3: Communicate with others using styles and methods appropriate to organizational standards, group expectations, and desired outcomes</p> <p>P4: Communicate information and ideas to others in a logical, concise and understandable manner</p> <p>P5: Regularly seek feedback on nature and quality of work relationships, and use feedback as the basis for own improvement and development</p>
CU3. Assist with human resource monitoring	<p>P1: Monitor work of business personnel against assigned roles and responsibilities within delegated authority levels</p>

	<p>P2: Monitor and control actual effort against business plan</p> <p>P3: Review skill levels against allocated tasks and recommend solutions, where required, to others</p> <p>P4: Advise others within delegated authority when assigned responsibilities are not met by business personnel</p> <p>P5: Undertake work in a multi-disciplinary environment according to established human resource management practices, plans, guidelines, and procedures</p> <p>P6: Resolve conflict within delegated authority according to agreed dispute-resolution processes</p> <p>P7: Assist in offering human resource development opportunities to individuals with skill gaps</p>
CU4. Contribute to evaluating human resource practices	<p>P1: Contribute to assessing effectiveness of business human resources management</p> <p>P2: Document lessons learned to support continuous improvement processes</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Alternative project personnel engagement options
- Job design principles and work breakdown structures
- Learning and development approaches that can be incorporated into the business life cycle
- Methods for skills analysis
- Project roles, responsibilities, and reporting requirements for human resources.

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to apply business human resources management approaches. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

CS-4: Develop Business Management Plan**Overview:**

This unit describes the skills and knowledge to develop a plan assessing business requirements and planning for all stages to completion and final documentation.

Unit of Competency	Performance Criteria
CU1. Prepare a business management plan	<p>P1: Evaluate and assess business brief and related documents</p> <p>P2: Produce document on business tasks and associated timelines, including installation processes and test requirements</p> <p>P3: Assess and produce a document on resource requirements to assist allocation of appropriate resources</p> <p>P4: Determine and document budgetary requirements</p> <p>P5: Discuss the roles of all identified parties associated with the business to ensure their involvement</p> <p>P6: Produce business verification document, including monitoring and control processes, and review processes such as quality audits</p> <p>P7: Consult with all relevant parties before finalizing the draft plan and make changes as appropriate</p>
CU2. Develop and evaluate management plan	<p>P1: Produce a preliminary plan for consultation, including identified factors that may impact on the realization of business and observance of relevant legislation, codes, regulation, and standards</p> <p>P2: Consult with client and clarify any amendment</p>
CU3. Communicate business information	<p>P1: Produce and document the final plan to include implementation details and training needs</p> <p>P2: Present the plan to the client and obtain sign off</p>

CU4. Contribute to assessing the effectiveness of communication	P1: Assist in the ongoing review of project outcomes to determine the effectiveness of communications-management activities P2: Report communications-management issues and responses to higher business authorities for the application of lessons learned to future businesses
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Key attributes of common food applications and related equipment
- Evaluate the connections to carrier infrastructure or equipment
- Current legislation relating to the design of installation of food processing and preservation equipment and connection to carrier services
- Advantages of purchase options to assist in delivering cost-effective solutions
- Workplace health and safety (WHS) issues that need to be built into a plan, with consideration of:
 - electrical safety
 - materials handling
 - physical hazards
 - chemical hazards
 - confined spaces

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to develop a business management plan. The evidence should integrate employability

skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

- determine the project attributes and specifications
- prepare a coherent draft business management plan
- consult on and revise a business management plan
- document final business management plan

CS-5: Develop Sales Plan**Overview:**

This unit describes the skills and knowledge required to develop a sales plan for a product or service for a team covering a specified sales territory based on strategic objectives and in accordance with established performance targets. It applies to individuals working in a supervisory or managerial sales role who develop a sales plan for a product or service.

Unit of Competency	Performance Criteria
CU1. Identify the organizational strategic direction	<p>P1: Obtain and analyze assessment of market needs and strategic planning documents</p> <p>P2: Review previous sales performance and successful approaches to identifying factors affecting performance</p> <p>P3: Analyze information on market needs, new opportunities, customer profiles, and requirements as a basis for decision making</p> <p>P4: Carry out a competitor analysis for rate structure</p>
CU2. Establish performance targets	<p>P1: Determine practical and achievable sales targets</p> <p>P2: Establish realistic timelines for achieving targets</p> <p>P3: Determine measures to allow for monitoring of performance</p> <p>P4: Ensure the objectives of the sales plan and style of the campaign are consistent with organizational strategic objectives and corporate image</p>
CU3. Develop a sales plan for a product	<p>P1: Determine approaches to be used to meet sales objectives</p> <p>P2: Identify additional expertise requirements and allocate budgetary resources accordingly</p> <p>P3: Identify risks and develop risk controls</p> <p>P4: Develop advertising and promotional strategy for product</p>

	P5: Prepare a budget for the sales plan P6: Present documented sales plan to appropriate personnel for approval
CU4. Identify support requirements	P1: Identify and acquire staff resources to implement a sales plan P2: Develop an appropriate selling approach P3: Train staff in the selling approach P4: Develop and assess staff knowledge of the product to be sold
CU5. Monitor and review sales plan	P1: Monitor implementation of the sales plan P2: Record data measuring performance versus sales targets P3: Make adjustments to sales plan as required to ensure required results are obtained

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Outline principles and techniques for selling
- Outline methods for monitoring sales outcomes
- Statistical techniques for analyzing sales and market trends
- Internal and external sources of information that is relevant to identifying the organizational strategic direction and developing a product sales plan.
- Competitors intelligence

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to develop a sales plan. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

- Analyze information from a range of sources to develop a sales plan for a product and sales territory that meets organizational strategic direction including:
 - resource requirements and budget
 - achievable sales targets
 - performance measures
 - approaches to be used to meet objectives
 - risk management
 - advertising and promotional strategy
 - product distribution channels
- Acquire staff, develop selling approach and provide training support on product knowledge and sales approach
- Monitor and evaluate performance and adjust the plan as appropriate.

CS-6: Address Customer Needs**Overview:**

This unit describes the skills and knowledge required to manage an ongoing relationship with a customer over a period of time. This includes helping customers articulate their needs and managing networks to ensure customer needs are addressed. It applies to individuals who are expected to have the detailed product knowledge to recommend customized solutions. In this role, individuals would be expected to apply organizational procedures and be aware of, and apply as appropriate, broader factors involving ethics, industry practice, and relevant government policies and regulations.

Unit of Competency	Performance Criteria
CU1. Assist customer to articulate needs	<p>P1: Ensure customer needs are fully understood and agreed</p> <p>P2: Explain and match available services and products to customer needs</p>
CU2. Satisfy complex customer needs	<p>P1: Explain possibilities for meeting customer needs</p> <p>P2: Assist customers to evaluate service and/or product options to satisfy their needs</p> <p>P3: Identify potential areas of difficulty in customer service delivery and take appropriate actions in a positive manner</p>
CU3. Manage networks to ensure customer needs are addressed	<p>P1: Establish effective regular communication with customers</p> <p>P2: Establish, maintain and expand relevant networks to ensure appropriate referral of customers to products and services from within and outside the organization</p> <p>P3: Maintain records of customer interaction in accordance with organizational procedures</p>
CU4. Convert customer inquiries into sales	<p>P1: Identify suitable products/services to meet needs</p> <p>P2: Handle customer queries, objections and rebuttals</p>

	<p>following standard scripts</p> <p>P3: Adapt your approach and style to customer preferences, within the limits of your competence and authority</p> <p>P4: Confirm customer wishes and needs to close sales</p> <p>P5: Obtain required financial information from customers, following your organization's procedures</p> <p>P6: Complete your organization's post-sales procedures to complete/ fulfill sales</p> <p>P7: Comply with relevant standards, policies, procedures, and guidelines when converting customer inquiries into sales</p>
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Organizational procedures and standards for establishing and maintaining customer service relationships
- Consumer rights and responsibilities
- Ways to Establish effective regular communication with customers
 - Outline details of products or services including with reference to:
 - possible alternative products and services
 - Variations within a limited product and service range.

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to address customer needs. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

. Demonstrated evidence is required of the ability to:

- address customer's needs
- check your work is complete and free from errors
- use organizational procedures to document customer satisfaction
- develop and maintain networks to support meeting customer needs
- Identify potential difficulties in meeting customer needs and taking appropriate action.
- communicate effectively with customers including
 - helping customers to articulate their needs and evaluate options
 - explaining products/services and how they match customer needs
 - establishing regular communication
 - explaining customer rights and responsibilities

CS-7: Manage Personal Finances**Overview:**

This unit of competency describes the outcomes required to develop, implement, and monitor a personal budget to plan regular savings and manage debt effectively.

Unit of Competency	Performance Criteria
CU1. Develop a personal budget	<p>P1: Calculate current living expenses using available information to prepare a personal budget.</p> <p>P2: Keep a record of all income and expenses for a short period of time to help estimate ongoing expenses.</p> <p>P3: Subtract total expenses from total income to determine a surplus or deficit budget for the specified period.</p> <p>P4: Find reasons for a deficit budget and ways to reduce expenditure identified.</p> <p>P5: Identify ways to increase income, if possible</p>
CU2. Develop a longer-term personal budget	<p>P1: Analyze income and expenditure and set longer-term personal, work, and financial goals.</p> <p>P2: Develop a longer-term budget based on the outcomes of short-term budgeting, and adjust to meet the living, work, and future career requirements.</p> <p>P3: Identify obstacles that might affect finances such as job loss, sickness or unexpected expenses contingency savings</p> <p>P4: Formulate a regular savings plan based on budget, using secure savings products and services.</p> <p>P5: Monitor expenditure against budget and identify areas of possible expenditure saving</p>
CU3. Identify ways to maximize future finances	<p>P1: Determine sources and ways to maximize personal income, including from work, investments, or available government payments/allowances.</p>

	<p>P2: Get further education or training to maintain or improve future income.</p> <p>P3: Identify the need for debt to finance living and other expenses, and determine the appropriate levels of debt and repayment.</p> <p>P4: Consolidate existing debt, where possible, to minimize interest costs and fees.</p> <p>P5: Seek professional money management services, where available, to ensure financial plans are effective and achievable.</p>
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Abilities to plan and organize to keep records and monitor a personal budget
- Abilities to set and review goals
- Basic financial management and record-keeping to enable the development and management of a personal budget
- Benefits of financial goal setting and personal budgeting to enable effective management of personal finances
- Numeracy skills to compare income and expenditure

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to manage personal finances. The evidence should integrate employability skills with

workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Demonstrated evidence is required of the ability to:

- develop a personal budget based on an analysis of expenditure and income;
- formulate goals and identify financial contingency plans; and
- Monitor expenditure for a period of up to 2 weeks.

CS-8: Solve Problems Which Endanger Safety And Security**Overview:**

This unit is focused on negotiation in critical incidents and the development of strategic responses designed to resolve threatening incidents.

Unit of Competency	Performance Criteria
CU1. Identify a problem	<p>P1: Form a problem statement and analyze the root cause</p> <p>P2: Take initiative in tackling problems rather than relying solely on directives</p> <p>P3: Follow logical steps in understanding root cause and analyzing potential solutions.</p>
CU2. Determine strategies for a required solution	<p>P1: Analyze all aspects of the incident for the degree of hazard, priorities, optional outcomes and appropriate strategies</p> <p>P2: Analyze and determine strategies and priorities on the incident sought from a range of sources</p> <p>P3: Apply a range of communication techniques to make and maintain contact with the key people</p> <p>P4: Provide clear and factual information to enable an honest and realistic assessment of the interests of the key people and their positions</p>
CU3. Coordinate support services	<p>P1: Assess the need for support services in terms of the determined strategies and priorities</p> <p>P2: Negotiate the resources of support services according to established procedures and availability</p> <p>P3: Provide information on strategies to support services and maintain the communication</p> <p>P4: Delegate roles and responsibilities according to expertise and resources</p>
CU4. Restore order	<p>P1: Assess the incidents for the degree of risk and take</p>

	<p>appropriate action to reduce and remove the impact of the incident and restore order</p> <p>P2: Take action designed to minimize risk and preserve the safety and security of all involved</p> <p>P3: Take action to prevent the escalation of the incident appropriate to the circumstances and agreed procedures.</p> <p>P4: Carry out the use of force for the restoration of control and the maintenance of security in the least restrictive manner.</p> <p>P5: Complete reports accurately and provided to the appropriate authority promptly</p> <p>P6: Review, evaluate, and analyze the incident and the organizational response to it and report it promptly and accurately.</p>
CU5. Provide leadership. direction and guidance to the workgroup	<p>P1: The link between the function of the group and the</p> <p>P2: goals of the organization</p> <p>P3: Participate in decision making routinely to develop, implement and review work of the group and to allocate responsibilities where appropriate</p> <p>P4: Give opportunities and encouragement to others to develop new and innovative work practices and strategies</p> <p>P5: Provide staff with the support and supervision necessary to perform work safely and without risk to health</p> <p>P6: Supervise appropriately the changing priorities and situations and takes into account the different needs of individuals and the requirements of the task</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- Organization's policies, guidelines, and procedures related to control and surveillance, safety, and preventing and responding to incidents and breaches of orders covered in the range of variables.
- Organization's management and accountability systems
- Teamwork principles and strategies
- Principles of effective communication
- Guidelines for use of equipment and technology
- Code of conduct

Critical Evidence(s) Required

The candidate needs to produce the following critical evidence(s) to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to resolve problems that jeopardize safety and security. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

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