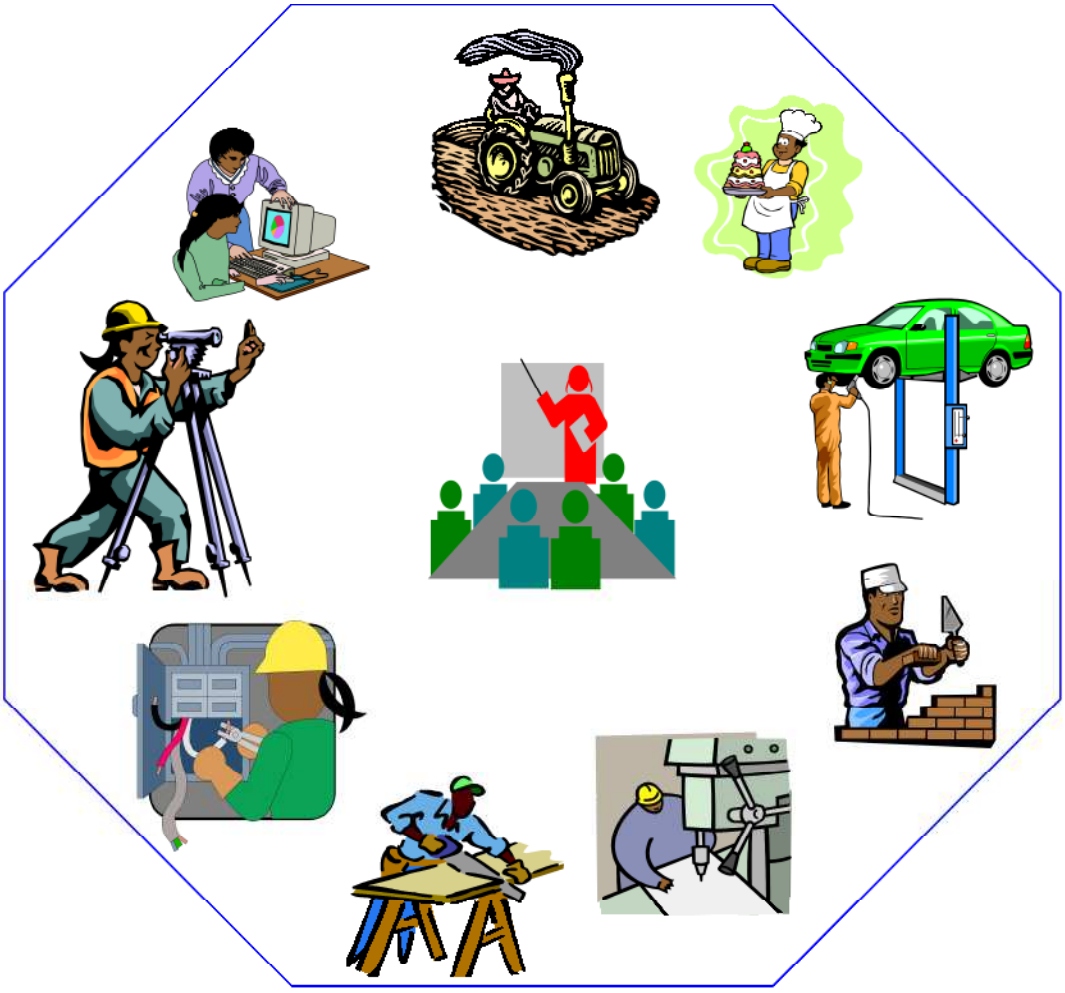
Federal Democratic Republic of Ethiopia

OCCUPATIONAL STANDARD

CONFECTIONARY PROCESSING

NTQF Level II. III and IV



Ministry of Education
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Introduction

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labor market.

The Ethiopian Occupational Standards (EOS) is the core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). They are national Ethiopian standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopia Occupational Standard which comprised of Units of Competence.

A Unit of Competence describes a distinct work activity. It is documented in a standard format that comprises:

- Occupational title and NTQF level
- Unit title
- Unit code
- Unit descriptor
- Elements and Performance criteria
- Variables and Range statement
- Evidence guide

Together all the parts of a Unit of Competence guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the occupation with all the key components of a Unit of Competence:

- chart with an overview of all Units of Competence for the respective level including the Unit Codes and the Unit Titles
- contents of each Unit of Competence (competence standard)
- occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards and for the individual, a career path

UNIT OF COMPETENCE CHART

Occupational Standard: Confectionary Processing

Occupational Code: IND COP

NTQF Level II

IND COP2 01 0613 Work Effectively In the Food Processing Industry	**IND COP2 02 0613** Examine Raw Ingredients Used In Confectionery	**IND COP2 03 0613** Operate a Boiled Confectionery Process
IND COP2 04 0613 Operate a Chocolate Conching Process	**IND COP2 05 0613** Operate a Chocolate Depositing or Molding Process	**IND COP2 06 0613** Operate a Confectionery Depositing Process
IND COP2 07 0613 Operate a Granulation and Compression Process	**IND COP2 08 0613** Operate a Panning Process	**IND COP2 09 0613** Operate a Chocolate Refining Process
IND COP2 10 0613 Operate a Starch Molding Process	**IND COP2 11 0613** Operate a Mixing or Blending Process	**IND COP2 12 0613** Operate an Automated Cutting Process
IND COP2 13 0613 Operate a Process Control Interface	**IND COP2 14 0613** Conduct Routine Maintenance	**IND COP2 15 0613** Implement the Food Safety Program and Procedures
IND COP2 16 0613 Apply Quality Systems and Procedures	**IND COP2 17 0613** Participate In Workplace Communication	**IND COP2 18 0613** Work In Team Environment
IND COP2 19 0613 Develop Business practice	**IND COP2 20 0613** Standardize and Sustain 3S	

NTQF Level III

IND COP3 01 0613 Prepare Chocolate and Chocolate Confectionery	**IND COP3 02 0613** Operate a Confectionery Depositing Process	**IND COP3 03 0613** Operate a Coating Application Process
IND COP3 04 0613 Implement and Review the Processing of Chocolate and Sugar-Panned Products	**IND COP3 05 0613** Operate a Chocolate Tempering Process	**IND COP3 06 0613** Perform Basic Tests
IND COP3 07 0613 Apply Raw Materials, Ingredient and Process Knowledge to Production Problems	**IND COP3 08 0613** Monitoring a Chocolate Refining Process	**IND COP3 09 0613** Monitor the Implementation of Quality and Food Safety Programs
IND COP3 10 0613 Operate Interrelated Processes in a Production System	**IND COP3 11 0613** Identify Cultural, Religious and Dietary Requirements for Food Products	**IND COP3 12 0613** Identify Equipment Faults
IND COP3 13 0613 Monitor Storage Facilities	**IND COP3 14 0613** Monitor Implementation of Work plan/Activities	**IND COP3 15 0613** Apply quality Control
IND COP3 16 0613 Lead Workplace Communication	**IND COP3 17 0613** Lead Small Teams	**IND COP3 18 0613** Improve Business Practice
IND COP3 19 0613 Prevent and Eliminate MUDA		

NTQF Level IV

IND COP4 01 0613 Implement and Review the Processing of Chocolate Confectionery	**IND COP4 02 0613** Apply Principles of Food Packaging	**IND COP4 03 0613** Implement and Review the Processing of High and Low Boil
IND COP4 04 0613 Implement and Review the Processing of Confectionery Products	**IND COP4 05 0613** Implement and Review the Processing of Aerated Confectioneries	**IND COP4 06 0613** Implement and Review the Production of Gums and Jellies
IND COP4 07 0613 Implement and Review the Production of Chocolate Products	**IND COP4 08 0613** Identify the Physical and Chemical Properties of Materials, Food and Related Products	**IND COP4 09 0613** Establish Operational Requirements for a Food Processing Enterprise
IND COP4 10 0613 Conduct Food Safety Audits	**IND COP4 11 0613** Implement Operational Plan	**IND COP4 12 0613** Apply Sensory Analysis in Food Processing
IND COP4 13 0613 Apply the Principles of Nutrition to Food Processing	**IND COP4 14 0613** Apply an Understanding of Food Additives	**IND COP4 15 0613** Supervise and Maintain a Food Safety Plan
IND COP4 16 0613 Optimize a Work Process	**IND COP4 17 0613** Schedule and Manage Production	**IND COP4 18 0613** Plan and Organize Work
IND COP4 19 0613 Migrate to New Technology	**IND COP4 20 0613** Establish Quality Standards	**IND COP4 21 0613** Develop Teams and Individual Skills
IND COP4 22 0613 Utilize Specialized Communication Skills	**IND COP4 23 0613** Manage and Maintain Small/Medium Business Operations	**IND COP4 24 0613** Apply Problem Solving Techniques and Tools

NTQF Level II

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Work Effectively in the Food Processing Industry**
Unit Code	**IND COP2 01 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to work effectively in the food processing industry by applying an understanding of the structure of the industry, workplace policies and procedures, and conditions relevant to their employment.

Elements	Performance Criteria
1. Overview the food processing industry	1.1. Sectors of the food processing industry are identified. 1.2. Key sector representatives and their roles are identified. 1.3. Relevant legislation and guidelines common employment in the sector are identified. 1.4. ***Conditions of employment*** in the food industries are identified and key responsibilities described.
2. Identify key production processes and supply chains	2.1. Raw materials used in the workplace and their source are identified. 2.2 Range of products produced in the workplace is identified. 2.3 Workplace production processes are identified for converting materials into products. 2.4. ***Supply chains*** for products are identified.
3. Carry out work responsibilities according to policies and procedures	3.1. Information on conditions of employment, ***company policies and procedures*** is identified. 3.2. Policies and procedures are applied when carrying out work role. 3.3. Rights, responsibilities and legal obligations are identified. 3.4. ***Key personnel*** and their roles are identified. 3.5. ***Employability skills*** required for working effectively are identified and applied. 3.6. Consequences of not following workplace environmental and safety policies and practices are identified.
4. Take responsibility for own skill development	4.1. Skills required for work role are identified and own ability assessed to determine learning needs. 4.2. Opportunities for skill development are identified and participated. 4.3. Responsibility is taken for own work tasks and role. 4.4. Own work is monitored against workplace standards and areas for improvement identified and acted upon. 4.5. ***Problem solving strategies*** are used to address problems, inconsistencies or concerns when fulfilling work role.

Variable	Range
Conditions of employment	May include: • pay and conditions • leave arrangements • reporting and timekeeping responsibilities • terms of employment, including permanent, casual and probationary periods • disciplinary procedures • staff facilities and amenities
Supply chains	Supply chains refer to: • concept of product flow from raw materials to production, distribution, marketing and sales • customers and suppliers
Company policies and procedures	May include: • codes of practice and general employment policies and procedures in areas, such as sexual harassment • EEO/affirmative action • anti-discrimination • racial vilification • workplace bullying
Key personnel	May include: • human resource personnel responsible for recruitment, training, pay and conditions issues • relevant site and operations managers • supervisors/team leaders industrial/work area representatives
Employability skills	May include: • ability to work in teams • ability to solve problems • ability to communicate in the workplace • using initiative and enterprise • using technology • ability to plan and organize • ability to manage self • ability to learn work-related skills and knowledge
Problem solving strategies	May include: • asking questions • reporting or referring to appropriate personnel • asking for help or support • referring to standard operating procedures • consideration of options • accessing information

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: • explain the principles of equal employment opportunity (EEO) and policies to prevent sexual harassment • follow relevant workplace policies • identify and explain the relevance of Occupational Health and Safety (OHS) and regulatory requirements for food industry employees • identify and explain workplace employment conditions • identify relevant workplace requirements, policies and procedures and explain their implications for trainees • list the markets where the company's products are distributed • name the products produced in own workplace • outline enterprise ethical standards and requirements for interacting with other employees and staff • relate to others in an effective and non-discriminatory way showing mutual respect • apply environmental practices • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Underpinning Knowledge	Demonstrates knowledge of • purpose and basic principles of the confectionary manufacturing process • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the manufacturing process and the effect of outputs on customer satisfaction and downstream processes such as filling, forming and baking • quality requirements of materials/ingredients and effect of variation on manufacturing process performance • quality standards required of the finished • manufacturing process specifications, procedures and operating parameters, including molding, couching depositing granulation and compression starch molding panning refining • operating requirements and parameters and corrective action required where operation is outside specified operating parameters

	• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the confectionary manufacturing production process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the manufacturing process and related control measures • common causes of variation and corrective action required, including the relationships between time and temperature and humidity in the manufacturing process • Occupational Health and Safety (OHS) hazards and controls, including the limitations of protective clothing and equipment relevant to the manufacturing process • requirements of different shutdowns as appropriate to the manufacturing process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the manufacturing process • basic operating principles of process control where relevant, including the relationship between control panels and systems and the physical equipment • manufacturing process changeover procedures and responsibilities where relevant • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrates skills to: • identify and access information on conditions of employment and workplace policies and procedures (information may be provided in print, audio-visual and/or verbal formats) • identify and locate materials/storage areas in the work place, relevant to work role, such as locating tank farms and other bulk storage locations and identifying special storage conditions (e.g. hazardous goods and temperature controlled stores areas) • identify and locate production and packing processes/main work areas in the workplace

	• model appropriate behavior when interacting with others and moving around the workplace • explain employee's responsibilities • explain the dispute resolution procedures in the workplace • explain the flow of product from receiver to sale in own workplace • explain the nature and role of work instructions and Standard Operating Procedures (SOPs) • explain the principles of equal employment opportunity (EEO) and policies to prevent sexual harassment • follow relevant workplace policies • identify and explain the relevance of Occupational Health and Safety (OHS) and regulatory requirements for food industry employees • identify and explain workplace employment conditions • identify relevant workplace requirements, policies and procedures and explain their implications for trainees • list the markets where the company's products are distributed • name the products produced in own workplace • outline enterprise ethical standards and requirements for interacting with other employees and staff • relate to others in an effective and non-discriminatory way showing mutual respect • apply environmental practices • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Examine Raw Ingredients Used in Confectionery**
Unit Code	**IND COP2 02 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to identify the key characteristics of raw materials used in confectionery products to support the achievement of production specifications.

Elements	Performance Criteria
1. Define raw ingredients used in confectionery production	1.1. ***Key confectionery groups*** are identified and features described. 1.2. ***Commonly used raw ingredients*** and their origins are identified. 1.3. ***Types of carbohydrates*** used in confectionery are identified. 1.4. ***Types of sweeteners*** used in confectionery are identified. 1.5. ***Grades*** and ***characteristics of sugar*** are described. 1.6. ***Types of starches and glucose syrups*** are identified. 1.7. Types of fats used in confectionery are identified. 1.8 ***Used of glucose*** in confectionary is identified.
2. Identify the effects of raw materials in confectionery production	2.1. Effects of using different types of commonly used raw ingredients in confectionery are identified. 2.2. Effects of using different types of carbohydrates and fats in confectionery are identified. 2.3. Effects of using different types of sugars in confectionery are identified. 2.4. Effects of using types and ***characteristics of starches*** and glucose syrups in confectionery are identified. 2.5. Effects of temperature and water on raw ingredients are identified. 2.6. Effects of production processes on raw ingredients are examined and described.
3. Identify processing requirements for raw materials	3.1. Specifications for production are identified. 3.2. Implications for processing of raw materials are identified. 3.3. Common problems associated with raw materials are identified according to ***workplace information***. 3.4. Actions required to address common problems are identified according to ***policies and procedures***.

	3.5. Storage and handling requirements for raw ingredients are identified. 3.6. Work is conducted in accordance with ***Legislative environmental*** guidelines.

Variable	**Range**
Key confectionery groups	May include: • high boils, cream pastes, toffees caramels and fudge • fondants • jellies, gums and pastilles • liquor ice • honeycomb, meringues, marshmallows and nougats • panned products • chewing gum • chocolate • sugar free products
Commonly used raw ingredients	May include: • sugar and other sweeteners • milk products • cocoa • fat/oil • fruits and nuts • gelling agents, such as starch, gelatin, pectin's and gums • additives, such as flavorings, coloring, lecithin and other emulsifiers, acids and preservatives
Types of carbohydrates	May include: • Monosaccharide's, such as glucose (dextrose), galactose, fructose, mannose, arabinose and xylems • Disaccharides, such as sucrose, lactose and maltose • Oligosaccharides, such as polydextrose, polyols, maltodextrins, hydrogenated starch hydrolysates, fructooligosaccharide and galctooligosaccharide • Polysaccharides, such as starch, dextrin's, cellulose, vegetable gums and glycogen
Types of sweeteners	May include: • sugar (raw, refined) • sucrose • molasses • brown sugar • honey • golden syrup • treacle • malt extract and licorice block

Grade of sugar	May include: • caster sugar • icing sugar • liquid sugar
Characteristics of sugar	May include: • sweetness • solubility • crystallization • inversion
Types of starches and glucose syrups	May include: • wheat • maize (corn) • rice • potato • grain • modified
Uses of glucose	May include: • anti-graining • resistance to activity by microorganisms • increasing product viscosity
Characteristics of starch	May include: • bifringence • viscosity
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Policies and procedures	May include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative environment	relevant to this industry includes: • the Food Standards Code, including labeling, weights and measures legislation • legislation covering food safety, environmental management, Occupational Health and Safety (OHS), anti-discrimination and equal opportunity

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • identify the key confectionery groups and the main raw materials used

	• describe the effects of raw materials in confectionery • describe the effects of temperature and water on raw materials • describe the effects of the production process on raw materials • identify common problems with raw materials in the production process and determine required action • access and interpret workplace information on raw materials
Underpinning Knowledge	Demonstrate knowledge of: • raw materials used in confectionery • origins of raw materials • confectionery product types • characteristics of raw materials • effects and uses of raw materials • common problems and action required • types of carbohydrates and uses • types of sweeteners and uses • types of starches and glucose syrups and uses • storage and handling requirements for raw materials
Underpinning Skills	Demonstrate skills in: • access and interpret workplace information on raw materials • examine production specifications • identify raw materials, uses and characteristics • identify sources of raw materials and key features • assess consequences of different uses of raw materials • identify requirements for achieving quality standards • use oral communication skills/language competence to fulfil the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Boiled Confectionery Process**
Unit Code	**IND COP2 03 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a high boil and low boil confectionery process.

Elements	Performance Criteria
1. Prepare the high/low boil equipment and process for operation	1.1 ***Services*** are confirmed and available to meet operating requirements. 1.2 ***Product ingredients*** for syrup are selected and combined in the sequence specified by batch/recipe instructions. 1.3 Cleaning and maintenance requirements and status of high/low boil process equipment are identified and confirmed. 1.4 Processing/operating parameters are entered as required to meet safety and production requirements. 1.5 Equipment performance is checked and adjusted as required. 1.6 Pre-start checks are carried out as required by workplace requirements.
2. Operate and monitor the high/low boil process	2.1 Ingredients and additives are delivered in the required quantities and sequence to meet recipe specifications. 2.2 The process is started and operated according to workplace procedures. 2.3 ***Typical equipment*** is monitored to identify variation in operating conditions. 2.4 Variation in equipment operation is identified and maintenance requirements are reported according to ***Workplace information*** reporting requirements. 2.5 Product is heated, cooked and cooled according to specification. 2.6 Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.7 The work area is maintained according to housekeeping standards. 2.8 Work is conducted in accordance with ***Legislative environmental*** guidelines. 2.9 Workplace records are maintained according to workplace recording requirements.

3. Shut down the high/low boil process	3.1 The appropriate ***shutdown procedure*** is identified. 3.2 The process is shut down according to workplace procedures. 3.3 Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	**Range**
Services	may include: • power • steam • water • vacuum • compressed and instrumentation air
Product ingredients	may include sugar substitutes
Typical equipment	may include: • pan or vacuum cookers • cold or marble tables and further processing equipment depending on use, such as forming, filling, pulling, beating, stamping, cooling equipment and crystallizing/beating equipment
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Legislative environment	may include: • the Food Standards Code, including labeling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Policies and procedures	• Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
High boil products	may include: • solid • striped and filled confectionery
Low boil products	may include: • caramels, nougats, creams, fudge, fondant, toffee, marshmallows, gums, jellies, liquor ice, paste, lozenges and fruit bars

Evidence Guide	
Critical Aspects of Competency	Demonstrates Knowledge and skills to: • conduct pre-start checks on machinery used for confectionery boiling • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrates Knowledge of: • purpose and basic principles of the high/low boil process relating to the range of products to be produced, such as: ➢ ingredients used and their purpose ➢ syrup making (super saturated solutions) ➢ relationship between temperature and moisture content ➢ the effect of vacuum on processing ➢ reactions such as crystallization ➢ process stages ➢ maturation and further processing requirements • basic operating principles of equipment, such as main equipment components, status and purpose of guards, the effect of vacuum on the cooking process and further processing, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the high/low boil process and the effect of outputs on downstream processes • quality requirements of materials used in low/high boil manufacture and effect of variation on process performance and outputs • quality characteristics required of process outputs • methods used to further process high and low boils, such as basic forming or extruding and stamping, cooling, pulling and aerating as required by product range • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems

	• methods used to monitor the high/low boil process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the high/low boil process and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the high/low boil process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the high/low boil process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrates skills to: • access workplace information to identify high/low boil process requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • start, operate, monitor and adjust high/low boil process equipment to achieve required outcomes, including combining ingredients in correct sequence according to recipe instructions, setting dosing/metering and related addition systems, loading or controlling loading of bulk ingredients, setting temperatures and operating vacuum

	• monitor control points and conduct inspections as required to confirm process remains within specification, such as: ➢ mixing tank temperature ➢ cooking temperatures ➢ vacuum settings (where relevant) ➢ moisture content ➢ ingredient addition as required ➢ product weight ➢ appearance and organoleptic characteristics • monitor supply and flow of materials to and from the high/low boil process • demonstrate changeover procedures • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take high/low boil process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Chocolate Couching Process**
Unit Code	**IND COP2 04 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a couching process.

Elements	Performance Criteria
1. Prepare the couching equipment and process for operation	1.1 Refined mass is made available to meet operating ***legislative requirements***. 1.2 Cleaning and maintenance requirements and status are identified and confirmed. 1.3 Machine components and related attachments are fitted and adjusted to meet operating requirements processing/operating parameters are entered as required to meet safety and production requirements. 1.4 ***Couching and related equipment*** performance is checked and adjusted as required. 1.5 Pre-start checks are carried out as required by workplace requirements. 1.6 ***Services*** are confirmed and available to meet operation requirements.
2. Operate and monitor the couching process	2.1 The couching process is started and operated according to workplace procedures. 2.2 ***Operation of equipment and processes*** is monitored to identify variation in operating conditions. 2.3 Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 2.4 The process is monitored to confirm that specifications are met. 2.5 Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification 2.6 The work area is maintained according to housekeeping standards 2.7 Work is conducted in accordance with workplace environmental guidelines 2.8 ***Workplace information*** is record and maintained according to workplace recording requirements

3. Shut down the couching process	3.1 The appropriate ***shutdown procedure*** is identified 3.2 The process is shut down according to workplace procedures 3.3 Maintenance requirements are identified and reported according to workplace reporting requirements

Variable	**Range**
Legislative requirements	May include: • the Food Standards Code, including labeling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity
Couching and related equipment	May include: • ingredient addition equipment • continuous or batch conches • conveyor systems
Services	May include: • power • steam • water • compressed and instrumentation air
Operation of equipment and processes	May include: • the use of process control panels and systems
Workplace information	May include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Shutdown procedures	May include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)

Evidence Guide	
Critical Aspects of Competency	Demonstrate knowledge and skills to: • conduct pre-start checks on machinery used for couching • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls

	• safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of couching chocolate, including: • processing stages in chocolate making and the role of couching • ingredients used in chocolate and those added during couching, such as ingredients in different types of chocolate as appropriate to production requirements and an understanding of the quality requirements and role of each main ingredient • changes that occur in ingredients during couching • significance of viscosity and methods of adjustment • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the couching process and the effect of outputs on downstream processes • quality requirements of mass and ingredients used, and effect of variation on process performance and outputs • quality characteristics required of the couching stage • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the couching process, including an understanding of viscosity testing procedures and other inspections and tests as required • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the couching process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information

	• environmental issues and controls relevant to the couching process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate skills to: • access workplace information to identify couching process requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary refined mass and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings to achieve required particle size, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • load materials in required sequence and work flake to specification • sequence ingredient addition to meet recipe specifications • monitor and adjust process equipment to achieve required outcomes, including testing and adjusting viscosity and monitoring other control points as required to confirm process is within specification, such as: ➢ ingredient addition sequence ➢ mix times ➢ temperature ➢ amperage/work input • monitor supply and flow of materials to and from the conches • demonstrate changeover procedures (unless continuous process) • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take couching process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility

	• complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Chocolate Depositing or Molding Process**
Unit Code	**IND COP2 05 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a depositing process that deposits chocolate into moulds or directly onto conveyors

Elements	Performance Criteria
1. Prepare the depositing equipment and process for operation	1.1. Materials and ***services*** are confirmed and available to meet operating requirements. 1.2. ***Typical equipment*** and ***ingredients*** are conditioned to meet production requirements. 1.3. Cleaning maintenance ***legislative requirements*** and status are identified and confirmed. 1.4. Machine components and related attachments are fitted and adjusted to meet operating requirements. 1.5. Processing/operating parameters are entered as required to meet safety and production requirements. 1.6. Pre-start checks are carried out as required by workplace requirements.
2. Operate and monitor the depositing/molding process	2.1. The process is started and operated according to workplace ***policies and procedures***. 2.2. Chocolate is deposited to achieve required ***coverage of moulds***. 2.3. Equipment is monitored to identify variation in operating conditions. 2.4. Variation in equipment operation is identified and maintenance requirements are reported according to ***workplace information*** requirements. 2.5. The process is monitored to confirm that specifications are met. 2.6. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.7. The work area is maintained according to housekeeping standards. 2.8. Work is conducted in accordance with workplace environmental guidelines. 2.9. Workplace records are maintained according to workplace recording requirements.

3. Shut down the depositing/molding process	3.1. The appropriate ***shutdown procedure*** is identified. 3.2. The process is shut down according to workplace procedures. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	**Range**
Services	may include: • Power, compressed and instrumentation air
Typical equipment	may include: • pump • depositor head • nozzle/injection plate • moulds • vibrators and shakers • cooling tunnel
Ingredients	may include chocolate and fillings or centres
Legislative requirements	may include: • Are typically reflected in procedures and specifications. Legislation relevant to this industry includes: • the Food Standards Code, including labelling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity
Policies and procedures	May include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Coverage of moulds	may include: • vibrating, spinning and/or inverting
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)

Evidence Guide	
Critical Aspects of Competency	Demonstrate Knowledge and skills in: • conduct pre-start checks on machinery used for depositing chocolate

	• start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of the chocolate depositing process, including ingredients used, handling and conditioning requirements and process stages • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the chocolate depositing process and the effect of outputs on downstream processes • quality characteristics and types of chocolate used for depositing, • quality requirements of centres as appropriate to product and the effect of variation on process outputs • quality characteristics to be achieved by the deposited product • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the chocolate depositing process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the chocolate depositing process and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the chocolate depositing process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage

	• isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the chocolate depositing process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate skill to: • access workplace information to identify chocolate depositing process requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate depositing head or settings, cancelling isolation or lockouts as required, confirming that equipment is clean, conditioning moulds/equipment and ingredients to specified temperature, confirming that depositing head is correctly aligned, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • start, operate, monitor and adjust chocolate depositing process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as: ➢ the supply of chocolate and center's to process as required ➢ temperatures of chocolate, moulds, depositor head, injection plate and conveyor as required ➢ pump stroke settings ➢ temperature profile of cooling tunnel ➢ deposited chocolate position/coverage ➢ shrinkage/de-molding process as required ➢ shell to filling weight ratio as required ➢ appearance of deposited product • monitor supply and flow of materials to and from the chocolate depositing process and equipment operation to confirm process remains within specification

	• demonstrate product/batch changeovers • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • carry out routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfil the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Confectionery Depositing Process**
Unit Code	**IND COP2 06 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required set up, operate, adjust and shut down a depositing process to deposit into solid or flexible moulds. This is sometimes known as starch less molding.

Elements	Performance Criteria
1. Prepare the depo equipment and pr for operation	1.1. Materials and ***services*** are confirmed and available to meet operating ***legislative requirements***. 1.2. Cleaning and maintenance requirements and status are identified and confirmed. 1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements. 1.4. Processing/operating parameters are entered as required to meet safety and production requirements. 1.5. ***Typical equipment*** performance is checked and adjusted as required. 1.6. Pre-start checks are carried out as required by workplace requirements. 1.7. Syrup is transferred to depositing equipment.
2. Operate and mon the depositing pro	2.1 The depositing process is started and operated according to workplace ***policies and procedures***. 2.2 Operation of equipment and processes is monitored to identify variation in operating conditions. 2.3 Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 2.4 The depositing process is monitored to confirm that specifications are met. 2.5 Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.6 The work area is maintained according to housekeeping standards. 2.7 Work is conducted in accordance with workplace environmental guidelines. 2.8 Workplace records are maintained according to ***workplace information*** requirements.

3. Shut down the depositing proces	3.1. The appropriate ***shutdown procedure*** is identified. 3.2. The process is shut down according to workplace procedures. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements .

Variable	**Range**
Services	may include: • power • compressed and instrumentation air
Legislative requirements	may include: • Are typically reflected in procedures and specifications. Legislation relevant to this industry includes: • the Food Standards Code, including labelling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity
Typical equipment	may include: • pump • depositor head • nozzle/injection plate • moulds • vibrators and shakers • cooling tunnel
Policies and procedures	Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Coverage of moulds	may include: • vibrating, spinning and/or inverting
Ingredients	may include chocolate and fillings or centres

Evidence Guide	
Critical Aspects of Competency	Demonstrate Knowledge and skills to: • conduct pre-start checks on machinery used for confectionery depositing

	• start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of the depositing process, such as product preparation and conditioning requirements and product depositing • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the depositing process and the effect of outputs on downstream processes • quality requirements of materials for depositing and effect of variation on depositing process performance and outputs • quality characteristics required of process outputs • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the depositing process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the depositing process and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the depositing process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities

	• procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the depositing process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate skill in: • access workplace information to identify depositing processing requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, setting up depositor controls, cooling parameters and remoulding process to meet production requirements, cancelling isolation or lock outs as required, confirming that related equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • start, operate, monitor and adjust depositing process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as: ➢ the supply of syrup to hopper ➢ controlling weight of liquid deposited in mould ➢ visual inspections to identify faults, such as tailings and placement of liquid in mould ➢ pump stroke settings ➢ cooling tunnel temperature profile ➢ shrinkage/demoulding process • monitor supply and flow of materials to and from the depositing process to confirm process remains within specification • set up and operate finishing equipment as required • demonstrate product changeover procedures • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility

	• locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take depositing process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Granulation and Compression Process**
Unit Code	**IND COP2 07 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a granulation and compression process.

Elements	Performance Criteria
1. Prepare the granulation equipment and process for operation	1.1. ***Ingredients and additives*** are confirmed and available to meet operating requirements. 1.2. Cleaning and maintenance requirements and status are identified and confirmed. 1.3. ***The granulation process*** is set to production specifications. 1.4. ***The granulation equipment*** performance is checked and adjusted as required. 1.5. Pre-start checks are carried out as required by workplace requirements.
2. Prepare the compression process for operation	2.1. Granulated materials are confirmed and available to meet operating requirements. 2.2. The ***compression equipment and process*** is set to production specifications. 2.3. The compression equipment performance is checked and adjusted as required. 2.4. Pre-start checks are carried out as required by workplace requirements.
3. Operate and monitor the granulation and compression process	3.1. The process is started and operated according to workplace ***policies and procedures***. 3.2. Ingredients are combined in specified sequence. 3.3. The granulation process is monitored to confirm granules of the required particle size are produced. 3.4. The compression process produces compressed product to specification. 3.5. Equipment is monitored to identify variation in operating conditions. 3.6. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements.

	3.7. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 3.8. The work area is maintained according to housekeeping standards. 3.9. Work is conducted in accordance with workplace environmental guidelines. 3.10 Workplace records are maintained according to ***workplace information*** requirements. 3.11 ***In process testing*** is carried out in production process.
4. Shut down the compression process	4.1. The appropriate ***shutdown procedure*** is identified. 4.2. The process is shut down according to workplace procedures. 4.3. Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	**Range**
Ingredients and additives	may include: • adhesives/binders • lubricants • fillers • colours and flavours
Granulation process	may include: • wet or dry
Granulating equipment	may include: • ribbon mixers • granulators • sieves • hammer mills and dryers
Compressing equipment and accessories	may include: • single or rotary punch compressors • punches and dies
Policies and procedures	may include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports

In-process tests	may include: • appearance • hardness • friability • disintegration time • weight and dimensions
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Services	may include: • power • steam • water • vacuum • compressed and instrumentation air

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • conduct pre-start checks on machinery used for confectionery granulation and compression • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of the granulation and compression process • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the granulation and compression process and the effect of outputs on downstream processes • quality requirements of ingredients for granulating and effect of variation on the granulation process • quality requirements of granulated mass and effect of variation on compression process

	• operating requirements of both granulation and compression, related parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the granulation and compression process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the granulation and compression process and related control measures • common causes of variation and corrective action required • OHS hazards and controls requirements of different shutdowns as appropriate to the granulation and compression process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the granulation and compression process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate the skill of: • access workplace information to identify granulation and compression process requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all

	safety guards are in place and operational • start, operate, monitor and adjust granulation process equipment to achieve required outcomes, including preparing granulated mix according to recipe instructions, monitoring control points and conducting inspections as required to confirm process remains within specification • monitor process, including: ➢ granule size ➢ moisture content ➢ fines ➢ supply of materials ➢ product appearance ➢ product weight, thickness and hardness, friability (this may require demonstration of related test procedures) • monitor supply and flow of materials to and from the granulation process and equipment operation to confirm process remains within specification • start, operate, monitor and adjust compression process equipment to achieve required outcomes, including installing/setting punches and dies • monitor supply and flow of materials to and from the compression process to confirm process remains within specification • demonstrate product/batch changeovers • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfil the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce

Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Planning Process**
Unit Code	**IND COP2 08 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a planning process to coat tablets and/or centers.

Elements	Performance Criteria
1. Prepare the panning equipment and process for operation	1.1. Materials and ***service*** are confirmed and available to meet operating requirements. 1.2. Centers and ***coating*** are selected and prepared according to batch/recipe instructions. 1.3. Cleaning and maintenance requirements and status are identified and confirmed. 1.4. The panning process is prepared to meet safety and production requirements. 1.5. ***Equipment*** performance is checked and adjusted as required. 1.6. Pre-start checks are carried out as required by workplace requirements.
2. Operate and monitor the panning process	2.1. The process is started and operated according to workplace procedures. 2.2. ***Operation of equipment and processes*** is monitored to identify variation in operating conditions. 2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 2.4. The process is monitored to confirm that specifications are met. 2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.6. The work area is maintained according to housekeeping standards. 2.7. Work is conducted in accordance with workplace environmental guidelines. 2.8. Workplace records are maintained according to workplace recording requirements.

3. Shut down the panning process	3.1. The appropriate ***shutdown procedure*** is identified. 3.2. The process is shut down according to workplace procedures. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements .

Variable	**Range**
Services	Typical examples include: • power • steam • compressed and instrumentation air
Coatings	may include: • hard and soft sugar or sugar-free syrup • chocolate coating
Equipment	includes: • coating pans • polishing pans • air blowing units and jacketed spray nozzles/heads
Operation of equipment and processes	may require: • the use of process control panels and systems
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Policies and procedures	may include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative requirements	may include: • relevant to this industry includes: • the Food Standards Code including labelling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • conduct pre-start checks on machinery used for panning

	• start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of*:* • purpose and basic principles of the panning process, such as centre preparation/conditioning procedures and requirements, coating preparation and the stages in the panning process • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the panning process and the effect of outputs on downstream processes • conditioning requirements for centres and coatings • quality characteristics of centres and coatings for use in the panning process and the effect of variation on panning process performance and outputs • quality characteristics to be achieved by the process • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the panning process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • food safety/contamination risks associated with the process and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the panning process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities

	• product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the panning process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate the skill of: • access workplace information to identify panning processing requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services, including necessary centres and coating material (syrup, film or chocolate) • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • start, operate, monitor and adjust panning process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as: ➢ pan preparation/coating ➢ coating addition rate ➢ sieving ➢ color addition ➢ drying air temperature and flow ➢ addition of polishing agent/gum • monitor supply and flow of materials to and from the panning process to confirm process remains within specification • take corrective action in response to out-of-specification results • follow workplace procedures for reworking scrap or out-of-specification product • demonstrate product/batch changeovers

	• respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • carry out routine maintenance according to enterprise procedures • clean and sanitise equipment according to enterprise procedures • use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Chocolate Refining Process**
Unit Code	**IND COP2 09 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a chocolate mixing and refining process.

Elements	Performance Criteria
1. Prepare and mix ingredients	1.1. Ingredients ***services*** are confirmed and made available to meet operating requirements. 1.2. Mixing processing/operating parameters are entered as required to meet safety and production requirements. 1.3. Ingredients and additives are delivered to the mixer in the required quantities and sequence to meet recipe specifications. 1.4. The mixing process is started and operated according to workplace ***policies and procedures***. 1.5. ***Refining equipment*** is monitored to identify variation in operating conditions. 1.6. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 1.7. The mixing process is monitored to confirm that specifications are met. 1.8. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification.
2. Prepare the refining equipment and process for operation	2.1. Mix is made available to meet operating requirements. 2.2. Cleaning and maintenance requirements and status are identified and confirmed. 2.3. Machine components and related attachments are fitted and adjusted to meet operating requirements. 2.4. Processing/operating parameters are entered as required to meet production requirements. 2.5. Equipment performance is checked and adjusted as required. 2.6. Pre-start checks are carried out as required by workplace requirements.

3. Operate and monitor the refining process	3.1. The refining process is started and operated according to workplace procedures. 3.2. ***Operation of equipment and processes*** is monitored to identify variation in operating conditions. 3.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 3.4. The process is monitored to confirm that specifications are met. 3.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 3.6. The work area is maintained according to housekeeping standards. 3.7. Work is conducted in accordance with ***legislative environmental*** guidelines. 3.8. Workplace records are maintained according to ***workplace information*** requirements.
4. Shut down the refining process	4.1. The appropriate ***shutdown procedure*** is identified. 4.2. The process is shut down according to workplace procedures. 4.3. Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	**Range**
Services	may include: • power • steam • water • compressed and instrumentation air
Policies and procedures	Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Refining Equipment	may include: • bulk materials handling equipment • continuous or batch mixers/kneaders • pre-refiners and refiners • conveyor systems
Operation of equipment and processes	may include: • the use of process control panels and systems

Legislative requirements	May include: • Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes: • the Food Standards Code including labeling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice, standard forms and reports
Shutdown procedures	may include cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • conduct pre-start checks on machinery used for refining chocolate • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate the Knowledge of: • purpose and basic principles of mixing and refining chocolate, including: ➢ processing stages in chocolate making and the role of mixing, refining and pre-refining as appropriate ➢ ingredients used in chocolate and those introduced during refining, such as ingredients in different types of chocolate as appropriate to production requirements and an understanding of the quality requirements and role of each main ingredient ➢ changes that occur in ingredients during mixing and refining ➢ significance of particle size for product characteristics • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation

	• services required and action to take if services are not available • the flow of the mixing and refining process and the effect of outputs on downstream processes • quality requirements of ingredients used and effect of variation on process performance and outputs • quality characteristics required of the refined mass • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the mixing and refining process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the mixing and refining process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the mixing and refining process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate skill in: • access workplace information to identify mixing and refining process requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary ingredients and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings to achieve required particle size, cancelling isolation or

	lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • sequence ingredient addition to the mixer to meet recipe specifications • start, operate, monitor and adjust process equipment to achieve required outcomes, including setting dosing/metering and related addition systems, loading or controlling loading of bulk ingredients, monitoring control points and conducting inspections as required to confirm process remains within specification • monitor process, including: ➢ ingredient addition sequence ➢ mix times ➢ throughput to refiner ➢ roller gap/particle size • monitor supply and flow of materials to and from the mixing and refining • demonstrate changeover procedures • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take refining process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce

Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Starch Molding Process**
Unit Code	**IND COP2 10 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down sugar molded products using a starch molding process.

Elements	Performance Criteria
1. Prepare the starch molding equipment and process for operation	1.1. ***Materials*** and ***services*** are confirmed and available to meet operating requirements. 1.2. Starch is correctly conditioned for molding. 1.3. Cleaning and maintenance requirements and status are identified and confirmed. 1.4. ***Starch mould product*** is prepared to meet production requirements. 1.5. ***Operation of equipment and processes*** parameters are selected for the depositor, starch molding and starch removal equipment to meet safety and production requirements. 1.6. Ingredients/mix is transferred to depositing equipment. 1.7. ***Equipmen***t performance is checked and adjusted as required. 1.8. Pre-start checks are carried out as required by workplace requirements.
2. Operate and monitor the starch molding and removal process	2.1. The process is started and operated according to workplace ***policies and procedures***. 2.2. Equipment is monitored to identify variation in operating conditions. 2.3. Variation in equipment operation is identified and maintenance requirements are reported according to ***workplace information*** requirements. 2.4. The process is monitored to confirm that specifications are met. 2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.6. The work area is maintained according to housekeeping standards. 2.7. Work is conducted in accordance with ***legislative environmental*** guidelines. 2.8. Workplace records are maintained according to workplace recording requirements.

3. Shut down the starch molding process	3.1. The appropriate ***shutdown procedure*** is identified. 3.2. The process is shut down according to workplace procedures. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	**Range**
Materials	may include: • starch • low or high boil syrups
Services	may include: • power • steam • water • vacuum • compressed and instrumentation air
Starch molded products	may include: • gums and jellies • marshmallows and caramels
Operation of equipment and processes	Operation of equipment and processes may require: • the use of process control panels and systems
Equipment	may include: • boiling pans (batch) • moguls (continuous process) • drying room and starch cleaning equipment • Related processes may include: • mixing and cooking of ingredients prior to depositing
Policies and procedures	Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Legislative requirements	May include: • Are typically reflected in procedures and specifications. Legislation relevant to this industry includes: • the Food Standards Code, including labeling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity

Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • conduct pre-start checks on machinery used for starch molding • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of the starch molding process, including an understanding of each stage: starch mould preparation product preparation and conditioning product depositing starch use and recovery cycle • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the starch molding and depositing process and the effect of outputs on downstream processes • quality requirements of starch moulds and materials for depositing and effect of variation on starch molding process performance and outputs, including the moisture absorption characteristics of starch and impact on the process • quality characteristics required of process outputs • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the starch molding process, such as inspecting, measuring and testing as required by the process

	• inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the starch molding process and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the starch molding process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the starch molding process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate the skill • access workplace information to identify starch molding processing requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services, including confirming starch condition and mould type • prepare product for depositing, such as ingredient addition, mixing and cooking to specification • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • deposit and stamp starch moulds • set up detaching and finishing equipment, such as blowing, oiling or sugaring clean starch and drying starch for re-use

	• start, operate, monitor and adjust starch molding process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as: ➢ the supply of liquid mass to hopper ➢ controlling weight of liquid deposited in mould ➢ monitoring pump stroke settings ➢ conducting visual inspections to identify faults, such as tailings and placement of liquid in mould • monitor supply and flow of materials to and from the starch molding process and equipment operation to confirm process remains within specification • demonstrate depositor head changeovers • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Mixing or Blending Process**
Unit Code	**IND COP2 11 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to combine ingredients and additives in the correct quantities and sequence and to operate and shut down mixing and blending equipment to achieve the required mix characteristics.

Elements	Performance Criteria
1. Prepare the mixing or blending equipment and process for operation	1.1. Materials and ***services*** are confirmed and available to meet production requirements 1.2. ***Pre-mixes*** are prepared as required 1.3. Cleaning and maintenance requirements and status are identified and confirmed 1.4. Machine components and related attachments are fitted and adjusted to meet operating requirements 1.5. Processing or operating parameters are entered as required to meet production requirements 1.6. ***Mixing or blending equipment*** performance is checked and adjusted as required 1.7. Pre-start checks are carried out as required by workplace requirements
2. Operate and monitor the mixing or blending process	2.1. ***Ingredients and additives*** are delivered to the mixer in the required quantities and sequence to meet recipe specifications 2.2. ***The mixing or blending process*** is started and operated according to workplace procedures 2.3. ***Operation of equipment and processes*** is monitored to identify variation in operating conditions 2.4. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements 2.5. The mixing process is monitored to confirm that specifications are met 2.6. Out-of-specification product or process outcomes are identified, rectified and/or reported to maintain the process within specification 2.7. Mix is transferred to required production or storage location 2.8. The work area is maintained according to housekeeping standards

	2.9. Work is conducted in accordance with workplace environmental guidelines 2.10. Workplace records are maintained according to workplace recording requirements
3. Shut down the mixing or blending process	3.1. The appropriate ***shutdown procedure*** is identified 3.2. The process is shut down according to workplace procedures 3.3. Maintenance requirements are identified and reported

Variable	**Range**
Services	may include: • power • steam • fuel • vacuum • compressed and instrumentation air
Pre-mixes	typically includes: • concentrated pre-mixes • pastes and cocktails • bulk mixes/blends • Materials may include: • bulk and non-bulk ingredients and additives
Mixing or blending equipment	may include: • measuring and weighing equipment, such as scales, load cells • dosing equipment • mixers • pumps • in-line homogenizers • conveyors • bulk materials transfer and materials handling equipment • storage facilities • Common mixer types include: • ribbon and vertical screw mixers/conveyors
Ingredients and additives	may include: • automatic materials transfer equipment • dosing equipment and/or be manually loaded
The mixing or blending Processes	may include: • extruding • stamping • cutting • Where this unit applies to cake and confectionery mix preparation, related processes may include: • aeration

Operation of equipment and processes	may require: • the use of process control panels and systems
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • prepare premixes for mixing or blending • conduct pre-start checks on machinery used for mixing or blending • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • apply food safety procedures
Underpinning Knowledge	Demonstrate the Knowledge of: • purpose and basic principles of preparing mixes and blends, including the characteristics and basic function of ingredients and additives used, method and sequence of ingredient addition required to achieve required blend characteristics, and where relevant, the purpose of conditioning, maturation or holding stages required prior to further processing of the mix • basic understanding of specific gravity and bulk density as appropriate for ingredients used • basic operating principles of mixing/blending equipment, including main equipment components, status and purpose of guards, equipment operating capacities and applications, the purpose and location of sensors and related feedback instrumentation, and awareness of calibration schedules for scales and related weighing/measuring equipment • services required and action to take if services are not available • the flow of the mixing process and the effect of mix preparation on downstream processes • procedures for requisitioning, receiving and returning ingredients from stores • ingredient handling requirements and shelf-life or coding • quality characteristics required of ingredients and additives and their effect on mixing process performance, including methods used to condition or prepare ingredients prior to addition

	• methods used to monitor the blending or mixing process, including inspecting, measuring, and testing as required by the process
	• inspection or test points (control points) in the process and the related procedures and recording requirements, such as:
	  ➢ flow rates
	  ➢ ingredient/additive addition sequence
	  ➢ times/temperatures and agitator speeds
	• required characteristics of blend, such as viscosity, appearance and temperature
	• required attributes of the mixed or blended output, such as chemical, texture and flavor profiles as required
	• the effect of the mixing or blending parameters, such as temperature and length of mix time on mixing outcome
	• contamination and food safety risks associated with the process and related control measures, including product compatibility and cross contamination risks and associated cleaning requirements, as well as common allergens used in mixes prepared
	• operating requirements and parameters and corrective action required where operation is outside specified operating parameters
	• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
	• common causes of variation and corrective action required
	• Occupational Health and Safety (OHS) hazards and controls
	• requirements of different shutdowns as appropriate to the blending or mixing process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage
	• product or process changeover procedures and responsibilities
	• isolation, lock out and tag out procedures and responsibilities
	• procedures and responsibility for reporting production and performance information
	• environmental issues and controls relevant to the mixing or blending process, including waste or rework collection and handling procedures related to the process
	• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment
	• characteristics of solutions, suspensions and emulsions where relevant
	• sampling and testing associated with process monitoring and control where relevant

	• product labeling and storage requirements where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate the skill sof: • access workplace information to identify mixing/blending requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • add/load materials in correct quantities and sequence, such as monitoring automatic ingredient addition and/or manual addition • start, monitor and adjust mixing or blending process equipment to achieve required outcomes, including monitoring flow rates/quantity, time or temperature and mix/blending settings • monitor control points and conduct inspections as required to confirm process remains within specification • monitor supply and flow of ingredients and additives to and from the mixing or blending process • pace mixing/blending to meet production requirements • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out or tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • demonstrate batch or product changeovers • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • label and store pre-mixes and/or mixes according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitize equipment according to enterprise procedures

	• use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate an Automated Cutting Process**
Unit Code	**IND COP2 12 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down an automated cutting process.

Elements	Performance Criteria
1. Prepare the automated cutting equipment and process for operation	1.1. Carcasses/pieces are confirmed and available. 1.2. Cleaning and maintenance requirements and status are identified and confirmed. 1.3. Machine components and related attachments are fitted and adjusted to meet safety, type/size and cutting requirements. 1.4. ***Production equipment*** performance is checked and adjusted as required. 1.5. Pre-start checks are carried out as required by workplace requirements. 1.6. ***Services*** are confirmed and available to meet production requirements.
2. Operate and monitor the automated cutting process	2.1. Carcasses/pieces are inspected to confirm that quality requirements are met. 2.2. Carcasses/pieces are hung to meet production pace. 2.3. Equipment is monitored to identify variation in operating conditions. 2.4. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 2.5. Quality and accuracy of cuts are monitored to confirm that specifications are met. 2.6. Out-of-specification outcomes are identified, rectified and/or reported to maintain the process within specification. 2.7. Work is conducted in accordance with workplace environmental guidelines. 2.8. The work area is maintained according to housekeeping standards. 2.9. Workplace records are maintained according to ***workplace information*** requirements.

3. Shut down the automated cutting process	3.1. The appropriate ***shutdown procedure*** is identified. 3.2. The process is shut down according to workplace procedures. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	**Range**
Production equipment	may include: • dedicated single and/or multiple cutting equipment • shackles and conveyor systems
Services	Typical examples include: • power • water and instrumentation air
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Shutdown procedures	may include cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Policies and procedures	may include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative requirements	may include: • Legislation relevant to this industry includes: • the Food Standards Code, including labelling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • conduct pre-start checks on machinery used for cutting • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.

Underpinning Knowledge	Demonstrate the knowledge of: • purpose and basic principles of the automated cutting process • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • the flow of the automated cutting process and the effect of outputs on downstream processes • quality characteristics to be achieved by the automated cutting process, including quality specifications and ability to assess cut quality and determine any required adjustments • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the automated cutting process, including inspecting the quality of cuts • inspection or test points (control points) in the automated cutting process and the related procedures and recording requirements, such as recording information (e.g. temperatures and product codes) • contamination/food safety risks associated with the automated cutting process and related control measures • common causes of variation and corrective action required • OHS hazards and controls, including the limitations of protective clothing and equipment relevant to the work process • requirements of different shutdowns as appropriate to the automated cutting process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the automated cutting process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant

Underpinning Skills	Demonstrate the skills to: • access workplace information to identify cutting requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary carcasses/pieces and services, including inspecting and removing carcasses/pieces of unacceptable quality • conduct pre-start checks, such as inspecting equipment condition to identify blade sharpness and other signs of wear, selecting appropriate settings and/or related parameters according to bird size/type, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for cutting process requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, confirming that all safety guards are in place and operational and running, and trialing cut to confirm accuracy/positioning where required • start, operate, monitor and adjust automated cutting process equipment to achieve required outcomes, including hanging carcasses/pieces to meet production pace, such as monitoring control points and conducting inspections as required to confirm cut accuracy within specification • monitor supply and flow of carcasses/pieces to and from the automated cutting process • take corrective action in response to out-of-specification results, including adjusting blades/knives within level of responsibility • respond to and/or report equipment failure within level of responsibility • demonstrate procedure to adjust equipment for bird/portion type/size • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take automated cutting process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • conduct routine maintenance such as blade replacement according to enterprise procedures • clean and sanitize equipment according to enterprise procedures • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor

	• work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Operate a Process Control Interface**
Unit Code	**IND COP2 13 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to operate a computer-based interface to modify and/or interrogate a control system.

Elements	Performance Criteria
1. Navigate the process control interface	1.1. The readiness of the control ***interface and related components*** for operation are confirmed. 1.2. Hardware provided is used to operate the interface. 1.3. Page links are used to move between screens. 1.4. Messages and alarms are acknowledged. 1.5. Required information is accessed from screen displays. 1.6. Interface system malfunctions are recorded and reported in accordance with workplace procedures.
2. Use interface system to operate and maintain a process within required parameters	2.1. Individual items of equipment and/or processes are started, monitored and shutdown using the control interface. 2.2. Equipment is selected, status altered and settings entered to meet operating requirements. 2.3. Sequences are activated to initiate process operation. 2.4. Equipment giving a bad signal or bad measurements is recognized and responsive action taken.
3. Analyze data to predict and control performance	3.1. Trends are selected and analyzed to identify performance patterns. 3.2. Causes of abnormal or unacceptable performance are identified and corrective action taken. 3.3. Information is recorded as required.

Variable	Range
Interface and related components	May include: • computer processor • monitor • keyboards • track ball • mouse • storage devices • printers • (It is linked to the process control system)

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • operate and navigate interface to access, retrieve, enter and store work data • start, operate, monitor and shut down process equipment • control and adjust equipment using control interface to achieve production requirements • recognize faults and inconsistencies and take corrective action • complete workplace records as required • apply safe work practices and identify OHS hazards and controls.
Underpinning Knowledge	Demonstrate knowledge of: • processes and equipment being controlled, including required processing sequences • operating principles of process control and interface system, including the relationship between control panels, systems and the physical equipment, and where relevant understanding of the operating conditions required for accurate information input from sensors and related instrumentation • action required to respond to error messages and alarms • typical faults that can occur when operating a process control interface and corrective action required • performance data collected by the control interface system and its application to troubleshoot performance, including the ability to identify and investigate related trend data to track cause and effect • recording requirements and responsibilities
Underpinning Skills	Demonstrate skills in: • use all hardware components to operate the control interface • navigate the system to locate and use information required, including moving between screens and locating relevant performance data • operate the control system using the interface, including start up and shut down equipment components and change set points as required • locate sensors and instrumentation providing input signals to the control system and confirm operating order within level of responsibility • recognize and respond to error messages and alarms as required • access relevant performance data using the control system, including locating and interpreting performance trend information • record log information using the interface system according to enterprise procedures

	• use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Conduct Routine Maintenance**
Unit Code	**IND COP2 14 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to inspect equipment and carry out routine maintenance and/or adjustment using a limited range of hand tools.

Elements	Performance Criteria
1. Conduct routine inspection of plant and equipment	1.1. Equipment is inspected to identify signs of wear. 1.2. Nature of maintenance requirement is assessed.
2. Prepare to conduct routine maintenance	2.1. ***Maintenance task*** is assessed to determine tools and services required. 2.2. ***Equipment*** is prepared for maintenance. 2.3. Hand tools are selected according to task requirements. 2.4. Tools are checked before use and unsafe and/or faulty items are reported within standard procedures. 2.5. Maintenance is planned and scheduled in consultation with affected work areas to minimize disruption to production.
3. Carry out routine maintenance	3.1. Typical ***routine maintenance*** on equipment is carried out according to workplace procedures. 3.2. Maintenance activities are reported according to workplace reporting requirements.
4. Complete maintenance tasks	4.1. Equipment is returned to operating order. 4.2. ***Tools and materials*** are stored according to workplace procedure. 4.3. Relevant personnel are notified of maintenance completion. 4.4. Housekeeping standards are maintained. 4.5. Work is conducted in accordance with workplace environmental guidelines.

Variable	Range
Typical routine maintenance tasks	may include: • replacement of consumable components, such as O-rings, hoses, filters and other 'bolt-on/bolt-off' equipment parts • lubrication of equipment and maintenance of fluid levels • simple adjustment, alignment or attachment of equipment components, parts, guides and sensors

	• clearing blocked nozzles, such as glue nozzles • positioning/attaching equipment components • carrying out basic maintenance on video inkjet machines
Equipment	May include: • informally or as part of a structured program associated with proactive maintenance
Routine maintenance	May include: • Routine maintenance is carried out according to company policies and procedures, licensing requirements, legislative requirements and industrial awards and agreements
Tools and materials	may include: • a limited range of hand tools, such as spanners and screwdrivers, grease guns, Allen keys and measuring and alignment equipment • Materials may include: • lubricants and consumables for video inkjet printers

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • identify routine maintenance tasks for machine or equipment • monitor operation and identify need for maintenance tasks • schedule maintenance tasks and communicate requirements with affected personnel • select and use appropriate hand tools to undertake routine maintenance • assess readiness for returning machine or equipment to operation or referring for further attention • complete maintenance documentation • apply safe work practices and identify OHS hazards and controls
Underpinning Knowledge	Demonstrate Knowledge of: • system in place to manage maintenance of plant and equipment in the workplace, including programs, such as responsive, preventative and proactive maintenance as appropriate • responsibilities for participating in the maintenance program, including scope of operator responsibilities, roles of others involved in plant and equipment maintenance and procedures for raising maintenance orders where requirements are outside operator role • basic operating principles of equipment to be maintained • signs and symptoms of faulty equipment and early warning signs of potential problems

	• basic checks used to confirm the nature of maintenance requirements, including distinguishing between mechanical and electrical faults and identifying probable causes or conditions that may increase maintenance requirements of equipment used • procedures for issuing, maintaining and storing tools used • safe use of hand tools and measuring instrumentation relevant to maintenance responsibilities • lubrication requirements, including requirements to use food grade lubricants as required and consequences of using incorrect type or amount of lubricants • safe work procedures, including appropriate signage of maintenance activities as required, use of appropriate personal protective clothing and equipment, and awareness of safety hazards and controls relating to maintenance tasks • methods used to render equipment safe to work on or clean including lock out/tag out and isolation procedures (in some cases this may involve liaising with other maintenance operators) • procedures and inspections to be carried out to confirm that equipment is in operating order and all parts are accounted for • food safety risks arising from poor personal hygiene, cleaning and housekeeping practices and procedures associated with routine maintenance • maintenance planning, scheduling and recording procedures
Underpinning Skills	Demonstrate skill in: • access workplace information such as the equipment history, faults or difficulties • select, fit and use personal protective clothing and/or equipment • inspect equipment for signs of wear, such as visual inspections to detect leaks, listening for unusual noises and/or vibrations • identify and describe maintenance requirements, including the ability to assess the urgency of the maintenance issue, recognize common types of maintenance requirements and run basic checks according to workplace procedures to confirm the need for and type of maintenance support required • take action to address maintenance requirements, such as carrying out routine maintenance within level of skill and responsibility and/or reporting outstanding maintenance to appropriate personnel using the required forms or request system • plan and schedule maintenance within level of responsibility, such as consulting affected personnel and/or work areas on timing and notifying of maintenance progress

	• prepare equipment and work area for routine maintenance, including cleaning equipment prior to carrying out maintenance and confirming that equipment is safe to work on, and simple isolation or tag out of equipment as required by workplace procedure • select and use hand tools as required to carry out maintenance task • select relevant parts and materials as required to carry out maintenance task • carry out routine maintenance tasks according to workplace procedures • on completion of maintenance tasks, return equipment to operational order, including confirming that all equipment parts, nuts and bolts are accounted for and correctly tightened, and where required, cleaning and sanitizing equipment • store tools in designated location, including basic tool maintenance, such as oiling • complete records of maintenance as required • maintain work area to meet housekeeping standards • use oral communication skills/language competence to fulfil the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Implement the Food Safety Program and Procedures**
Unit Code	**IND COP2 15 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required maintaining personal hygiene and conduct food handling, housekeeping and waste disposal related to work tasks and responsibilities where work involves operation of production and/or packaging equipment and processes.

Elements	Performance Criteria
1. Implement the food safety program	1.1. ***Food handling*** requirements are identified. 1.2. Food handling is carried out according to the ***food safety program***. 1.3. ***Food safety hazards*** are controlled as required by the food safety program. 1.4. Where food safety control requirements are not met, the incident is promptly reported and corrective action is taken. 1.5. Food safety information is recorded to meet requirements of the food safety program. 1.6. The ***Workplace information*** is maintained in a clean and tidy order to meet workplace standards. 1.7. Work is conducted in accordance with workplace environmental guidelines.
2. Participate in maintaining and improving food safety	2.1. Work area, materials, equipment and product are routinely ***monitored*** to ensure compliance with food safety requirements. 2.2. Processes, practices or conditions which could result in a ***food safety breach*** are identified and reported according to workplace reporting requirements. 2.3. Corrective action is taken in accordance with the food safety program. 2.4. Food safety issues are raised with designated personnel.
3. Comply with personal hygiene standards	3.1. ***Personal hygiene*** meets the requirements of the food safety program. 3.2. ***Health conditions and/or illness*** are reported as required by the food safety program. 3.3. ***Clothing and footwear*** worn are made appropriate for the food handling task and meets the requirements of the food safety program. 3.4. Movement around the workplace is complied with the food safety program.

Variable	Range
Food handling	May include: • food receipt and storage • food preparation • cooking, holding, cooling, chilling and reheating • packaging, disposal
A food safety program	May include: • A food safety program is a written document that specifies how a business will control all food safety hazards that may be reasonably expected to occur in all food handling operations of the food business. The food safety program and related procedures must comply with legal requirements of the food safety standards and must be communicated to all food handlers. Where no food safety program is in place, food safety requirements may be specified in general operating procedures
Food safety hazard	May include: • A food safety hazard is a biological, chemical or physical agent in, or condition of, food that has the potential to cause an adverse health effect
Workplace information	May include: • food safety program • Standard Operating Procedures (SOPs) • specifications • log sheets • written or verbal instruction
Monitoring	May include: • Monitoring describes the methods used to confirm that a food safety hazard is in control, such as: • taking temperatures • collecting samples • conducting visual inspections • conducting other tests as required
breach of food safety	May include: • failure to check delivery temperatures of potentially hazardous chilled food • failure to place temperature-sensitive food in temperature controlled storage conditions promptly • failure to wash hands when required • use of cloths for unsuitable purposes
Personal hygiene	May include minimum personal hygiene requirements are specified by the food safety program. at a minimum this must meet legal requirements as set out in the Food Safety Standard 3.2.2, Division 4:14 and/or state or territory legislation/regulations

health conditions and illnesses requirements	May include: • Reporting of health conditions and illnesses requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in Food Safety Standard 3.2.2, Division 4:13 and/or state or territory legislation/regulations
Clothing and footwear	May include: • Appropriate clothing and footwear depends on work requirements. It should be designed to ensure that the body and clothing itself does not contaminate food or surfaces likely to come into contact with food. Examples of clothing designed to prevent contamination by the body include: • purpose designed overalls or uniforms • hair-nets • beard snoods • gloves • overshoes
Products**/**materials handled and stored	May include: • raw materials • ingredients • consumables • part-processed product • finished product and cleaning materials
Responsibility for monitoring food safety	May include: • Responsibility for monitoring food safety, identifying breaches in food safety procedures and taking corrective action relates to own tasks and responsibilities and occurs in the context of the food safety program in the workplace

Evidence Guide	
Critical Aspects of Competency	A candidate must demonstrate the ability to: • identify own responsibilities with regard to food safety • identify food safety risks in the workplace and the control measures used to manage them • apply control measures in own work • monitor compliance with food safety standards • identify and act on non-compliances and participate in improving safety • maintain required standards of personal hygiene • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • Apply food safety procedures.

Underpinning Knowledge	Demonstrate Knowledge of: • sources of information and expertise on procedures and responsibilities for food safety relating to own work • basic concepts of HACCP-based food safety, including identification of hazards that are likely to occur, establishing appropriate methods of control and confirming that controls are met • food safety management arrangements in the workplace, including awareness of food safety legislation, workplace policies and procedures to implement responsibilities, understanding the relationship between the quality system and food safety program, personnel responsible for developing and implementing the food safety program, the role of internal and external auditors as appropriate, procedures followed to investigate contamination events, and performance improvement processes • awareness of common microbiological, physical and chemical hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences and control methods to prevent occurrence • basic understanding of the properties, handling and storage requirements of ingredients, materials and products handled and used • suitable standard for materials, measuring devices, equipment and utensils used in the work area • food safety requirements related to work responsibilities, including personal hygiene, requirements and procedures to report illness and safe food handling practices for own work • methods used to monitor that food safety is under control, including the purpose of sampling and taking measurements, such as temperature and pH, and conducting inspections and tests • action required in the event of non-compliance (corrective action is typically described in the food safety program and/or related workplace information) • purpose of keeping records and the recording requirements of the food safety program • methods used in the workplace to isolate or quarantine food which may be unsafe • product and ingredient traceability procedures, such as product recall where required by work responsibilities • clothing and footwear requirements for working in and/or moving between food handling areas

	• personal clothing maintenance, laundering and storage requirements • appropriate bandages and dressings to be used when undertaking food handling • housekeeping requirements and responsibilities relating to own work, and use and storage of housekeeping/cleaning equipment where relevant • procedures to follow in the event of pest sighting or discovery of infestation • purpose and importance of cleaning and sanitation procedures • waste collection, recycling and handling procedures relevant to own work responsibilities • cleaning and sanitation procedures where relevant • impact of rework handling/addition on food safety where relevant • sampling and test methods where relevant
Underpinning Skills	Demonstrate skills to: • identify own responsibilities with regard to food safety • identify food safety risks in the workplace and the control measures used to manage them • apply control measures in own work • monitor compliance with food safety standards • identify and act on non-compliances and participate in improving safety • maintain required standards of personal hygiene • complete workplace records as required • apply safe work practices and identify OHS hazards and control • apply food safety procedures.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Apply Quality Systems and Procedures**
Unit Code	**IND COP2 16 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to apply quality principles and system requirements when carrying out work responsibilities where work involves the operation of packaging and/or processing equipment. This unit has application in a food processing environment. It typically targets the production worker responsible for applying quality standards to work operations.

Elements	Performance Criteria
1. Monitor quality of work outcome	1.1. Quality requirements are identified as per organizational specifications. 1.2. Inputs are inspected to confirm capability to meet quality requirements. 1.3. Work is conducted to produce required outcomes. 1.4. Work processes are monitored to confirm quality of output and/or service. 1.5. Processes are adjusted to maintain outputs within specification.
2. Participate in maintaining and improving quality at work	2.1. Work area, materials, processes and product are routinely monitored to ensure compliance with quality requirements. 2.2. Work is conducted in accordance with ***workplace information***, environmental guidelines, ***policies and procedures***. 2.3. Non-conformance in inputs, process, product and/or service is identified and reported according to workplace reporting requirements. 2.4. Corrective action is taken within level of responsibility, to maintain quality standards. 2.5. Quality issues are raised with designated personnel.

Variable	Range
Workplace information	May include: • Standard Operating Procedures (SOPs) • quality specifications • food safety plans • log sheets • standard forms and reports
Policies and procedures	May include work is carried out in accordance with company policies and procedures, licensing and regulatory requirements, legislative requirements and industrial awards and agreements

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: • identify quality requirements and key elements of the quality system • conduct work according to quality standards • monitor quality and identify and act on non-compliances • Participate in identifying quality system improvements.
Underpinning Knowledge	Demonstrates knowledge of: • quality policy, procedures and responsibilities • quality system used in the workplace, including the relationship between the quality system and food safety program, sources of information on quality requirements, the role of internal and external auditors, as appropriate, and performance improvement processes • basic concepts of quality assurance including hazards, risk assessment and control methods • requirements of internal and external customers • control points for own work, including the purpose of the control point, the risk if not controlled and the method of control used • monitoring, testing and inspection procedures relating to process control requirements • scope to correct/control variation within equipment and process capacity parameters • evidence of out-of-specification or unacceptable performance • procedures for responding to out-of-specification or unacceptable performance/outcomes, including procedures for identifying or isolating materials or product of unacceptable quality • systems used to trace product ingredients as relevant to own work • requirements to report and record quality information • sampling and test methods and procedures where relevant
Underpinning Skills	Demonstrates skills to: • access and apply workplace information on quality requirements for own work • identify control points or inspection points for own work and related methods used to monitor quality • maintain quality of own work, including relevant checks and inspections where required in order to monitor control points and check and inspect equipment, materials, product, packaging consumables, processing conditions and service standards relevant to own work • identify and correct variation within boundaries of work role, and use quality data where required

	• determine when and how to make adjustments to maintain output within specified parameters • identify and respond to out-of-specification or unacceptable inputs and/or outputs • record quality data in required format • conduct tests related to work responsibilities according to enterprise procedures • collect samples as required by sampling regime according to enterprise procedures • use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Participate in Workplace Communication**
Unit Code	**IND COP2 17 0613**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements.

Elements	Performance Criteria
1. Obtain and convey workplace information	1.1 Specific and relevant information is accessed from ***appropriate sources***. 1.2 Effective questioning, active listening and speaking skills are used to gather and convey information. 1.3 Appropriate ***medium*** is used to transfer information and ideas. 1.4 Appropriate non- verbal communication is used. 1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed. 1.6 Defined workplace procedures for the location and ***storage*** of information are used. 1.7 Personal interaction is carried out clearly and concisely.
2. Participate in workplace meetings and discussions	2.1 Team meetings are attended on time. 2.2 Own opinions are clearly expressed and those of others are listened to without interruption. 2.3 Meeting inputs are consistent with the meeting purpose and established ***protocols***. 2.4 ***Workplace interactions*** are conducted in a courteous manner. 2.5 Questions about simple routine workplace procedures and matters concerning working conditions of employment are asked and responded to. 2.6 Meetings outcomes are interpreted and implemented.
3. Complete relevant work related documents	3.1 Range of ***forms*** relating to conditions of employment is completed accurately and legibly. 3.2 Workplace data is recorded on standard workplace forms and documents. 3.3 Basic mathematical processes are used for routine calculations.

	3.4 Errors in recording information on forms/ documents are identified and properly acted upon. 3.5 Reporting requirements to supervisor are completed according to organizational guidelines.

Variable	Range
Appropriate sources	May include: • Team members • Suppliers • Trade personnel • Local government and Industry bodies
Medium	May include: • Memorandum • Circular • Notice • Information discussion • Follow-up or verbal instructions • Face to face communication
Storage	May include: • Manual filing system • Computer-based filing system
Protocols	May include: • Observing meeting • Compliance with meeting decisions • Obeying meeting instructions
Workplace interactions	May include: • Face to face • Telephone • Electronic and two way radio • Written including electronic, memos, instruction and forms, non-verbal including gestures, signals, signs and diagrams
Forms	May include: • Personnel forms, telephone message forms, safety reports

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Prepare written communication following standard format of the organization • Access information using communication equipment • Make use of relevant terms as an aid to transfer information effectively • Convey information effectively adopting the formal or informal communication

Underpinning Knowledge	Demonstrate knowledge of: • Effective communication • Different modes of communication • Written communication • Organizational policies • Communication procedures and systems • Technology relevant to the enterprise and the individual's work responsibilities
Underpinning Skills	Demonstrate skills to: • Follow simple spoken language • Perform routine workplace duties following simple written notices • Participate in workplace meetings and discussions • Complete work related documents • Estimate, calculate and record routine workplace measures • Do basic mathematical processes of addition, subtraction, division and multiplication • relate to people of social range in the workplace • Gather and provide information in response to workplace Requirements
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Work in Team Environment**
Unit Code	**IND COP2 18 0613**
Unit Descriptor	This unit covers the skills, knowledge and attitudes to identify role and responsibility as a member of a team.

Elements	Performance Criteria
1. Describe team role and scope	1.1 The ***role and objective of the team*** are identified from available ***sources of information***. 1.2 Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources.
2. Identify own role and responsibility within team	2.1 Individual role and responsibilities within the team environment are identified. 2.2 Roles and responsibility of other team members are identified and recognized. 2.3 Reporting relationships within team and external to team are identified.
3. Work as a team member	3.1 Effective and appropriate forms of communications used and interactions undertaken with team members who contribute to known team activities and objectives. 3.2 Effective and appropriate contributions are made to complement team activities and objectives, based on individual skills and competencies and ***workplace context***. 3.3 Protocols are observed in reporting using standard operating procedures. 3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives and individual competencies of the members.

Variable	Range
Role and objective of team	May include but not limited to: • Work activities in a team environment with enterprise or specific sector • Limited discretion, initiative and judgment maybe demonstrated on the job, either individually or in a team environment
Sources of information	May include but not limited to: • Standard operating and/or other workplace procedures • Job procedures • Machine/equipment manufacturer's specifications and instructions

	• Organizational or external personnel • Client/supplier instructions • Quality standards • OHS and environmental standards
Workplace context	May include but not limited to: • Work procedures and practices • Conditions of work environments • Legislation and industrial agreements • Standard work practice including the storage, safe handling and disposal of chemicals • Safety, environmental, housekeeping and quality guidelines

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Operate in a team to complete workplace activity • Work effectively with others • Convey information in written or oral form • Select and use appropriate workplace language • Follow designated work plan for the job • Report outcomes
Underpinning Knowledge	Demonstrate knowledge of: • Communication process • Team structure • Team roles • Group planning and decision making
Underpinning Skills	Demonstrate skills to: • Communicate appropriately, consistent with the culture of the workplace
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Develop Business Practice**
Unit Code	**IND COP2 19 0613**
Unit Descriptor	This unit specifies the outcomes required to establish a business operation from a planned concept. It includes researching the feasibility of establishing a business operation, planning the setting up of the business, implementing the plan and reviewing operations once commenced.

Elements	Performance Criteria
1. Identify business opportunity	1.1 ***Business opportunities*** are investigated and identified. 1.2 Feasibility study is undertaken to determine likely ***business viability***. 1.3 Market research on product or service is undertaken. 1.4 Assistance with feasibility study of ***specialist and relevant parties*** is sought as required. 1.5 Impact of emerging or changing technology including e-commerce, on business operations is evaluated. 1.6 Practicability of business opportunity is assessed in line with perceived risks, returns sought and resources available. 1.7 Business plan is completed for operation.
2. Identify personal business skills	2.1 Financial and business skills available are identified and taken into account when business opportunities are researched. 2.2 ***Personal skills/attributes*** are assessed and matched against those perceived as necessary for a particular business opportunity. 2.3 ***Business risks*** are identified and assessed according to resources available and personal preferences.
3. Plan for establishment of business operation	3.1 Business structure and operations are determined and documented. 3.2 Procedures are developed and documented to guide operations. 3.3 Financial backing is secured for business operation. 3.4 Business legal and regulatory requirements are identified and complied. 3.5 ***Human and physical resources*** required to commence business operation are determined. 3.6 Recruitment strategies are developed and implemented.

4. Implement establishment plan	4.1 Marketing of business operation is undertaken. 4.2 Physical and human resources are obtained to implement business operation. 4.3 ***Operational unit*** is established to support and coordinate business operation. 4.4 Monitoring process is developed and implemented for managing operation. 4.5 ***Legal documents*** are carefully maintained and relevant records are kept and updated to ensure validity and accessibility. 4.6 Contractual procurement rights for goods and services including ***contracts with relevant people****,* negotiated and secured as required in accordance with the business plan. 4.7 Options for leasing/ownership of business premises identified and contractual arrangements are completed in accordance with the business plan.
5. Review implementation process	5.1 Review process for implementation of business operation is developed and implemented. 5.2 Improvements in business operation and associated management process are identified. 5.3 Identified improvements are implemented and monitored for effectiveness.

Variable	**Range**
Business opportunities	May include: • expected financial viability • skills of operator • amount and types of finance available • returns expected or required by owners • likely return on investment • finance required and lifestyle issues
Business viability	May include: • opportunities available • market competition • timing/ cyclical considerations • skills available • resources available • location and/ or premises available • risk related to a particular business opportunity, especially • in regard to Occupational Health and Safety and • environmental considerations

Specialist and relevant parties	May include: • Chamber of commerce • Financial planners and financial institution representatives, business planning specialists and marketing specialists • accountants • lawyers and providers of legal advice • government agencies • industry/trade associations • online gateways • business brokers/business consultants
Personal skills/attributes	May include: • technical and/ or specialist skills • business knowledge and skills • entrepreneurship • willingness to take risks
Business risks	May include: • occupational health and safety and environmental • considerations • relevant legislative requirements • security of investment • market competition • security of premises/ location • supply and demand • resources available
Human and physical resources	May include: • software and hardware • office premises • communications equipment • specialist services through outsourcing, contracting and • consultancy • staff and vehicles
Operational unit	May include: • office location staffed with required personnel and equipped to service and support business • home-based site or other location such as leased or owned property
Legal documents	May include: • partnership agreements, constitution documents, statutory books for companies (Register of Members, Register of Directors and Minute Books), Certificate of Incorporation, Franchise Agreements and financial documentation, appropriate software for financial records • recordkeeping including personnel, financial, taxation, OHS and environmental

Contracts with relevant people	May include: • owners, suppliers, employees, landlords, agents, distributors, customers or any person with whom the business has, or seeks to have, a performance-based relationship

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: • that a business operation has been planned and implemented from initial research into feasibility of the business and completion of the plan, through to implementing the plan and commencing operations • the ability to evaluate the results of research and assess the likely viability and practicability of a business opportunity, taking into account the current business/market climate and resources available
Underpinning Knowledge	Demonstrate knowledge of: • Federal and regional government legislative requirements affecting business operations, especially in regard to Occupational Health and Safety (OHS), Equal Employment Opportunity (EEO), industrial relations and anti-discrimination • Technical or specialist skills relevant to the business operation • Financing options • Business systems and operations • Relevant marketing, management, sales and financial concepts • Methods for researching business opportunities • Principles of risk management relevant to the business • Methods of identifying relevant specialist services to complement the business • Forms and administrative systems • Services available and charges • Planning and control systems (sales, • Advertising and promotion, distribution and logistics • Financial recording systems • Legal rights and responsibilities • Record keeping duties • Operational factors relating to the business (provision of professional services, products)
Underpinning Skills	Demonstrate skills of: • Literacy skills to interpret legal requirements, company policies and procedures and immediate, day-to-day demands • Marketing skills • Business planning skills • Entrepreneurial skills • Problem-solving skills

	• OHS skills • Time management skills • Belief in services and products offered by the business • Communication skills including questioning, clarifying, reporting, and giving and receiving constructive feedback • Technical and analytical skills to interpret business documents, reports and financial statements and projections • Ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities • Problem solving skills to develop contingency plans • Using computers and software packages to record and manage data and to produce reports • Literacy skills to enable interpretation of business information, numeracy skills for data analysis to aid research • Research skills to identify a business opportunity and to conduct a feasibility study • Analytical skills to assess personal attributes and to identify business risks • Observation skills for identifying appropriate people, resources and to monitor work
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Standardize and Sustain 3S**
Unit Code	**IND COP2 20 0613**
Unit Descriptor	This unit of competence covers the knowledge, skills and attitudes required by worker to standardize and sustain 3S to his/her workplace. It covers responsibility for the day- to-day operations of the workplace and ensuring that continuous improvements of Kaizen elements are initiated and institutionalized.

Elements	Performance Criteria
1. Prepare for work.	1.1 Work instructions are used to determine job requirements, including method, material and equipment. 1.2 Job specifications are read and interpreted following working manual. 1.3 ***OHS requirements***, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work. 1.4 ***Safety equipment and tools*** are identified and checked for safe and effective operation. 1.5 ***Tools and equipment*** are prepared and used to implement 3S.
2. Standardize 3S.	2.1 Plan is prepared and used to standardize 3S activities. 2.2 ***Tools and techniques*** to standardize 3S are prepared and implemented based on ***relevant procedures***. 2.3 Checklists are followed for standardize activities and ***reported*** to ***relevant personnel***. 2.4 The workplace is kept to the specified standard. 2.5 Problems are avoided by standardizing activities.
3. Sustain 3S.	3.1 Plan is prepared and followed to standardize 3S activities. 3.2 ***Tools and techniques*** to sustain 3S are discussed, prepared and implemented based on relevant procedures. 3.3 Workplace is inspected regularly for compliance to specified standard and sustainability of 3S techniques. 3.4 Workplace is cleaned up after completion of job and before commencing next job or end of shift. 3.5 Situations are identified where compliance to standards is unlikely and actions specified in procedures are taken.

	3.6 Improvements are recommended to lift the level of compliance in the workplace. 3.7 Checklists are followed to sustain activities and reported to relevant personnel. 3.8 Problems are avoided by sustaining activities.

Variable	Range
OHS requirements	May include but not limited to: • Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances. • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices. • Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. • Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
Safety equipment and tools	May include but not limited to: • dust masks / goggles • glove • working cloth • first aid • safety shoes
Tools and equipment	May include but not limited to: • paint • hook • sticker • signboard • nails • shelves • chip wood • sponge • broom • pencil • shadow board/ tools board

Tools and techniques	May include but not limited to: • 5S Job Cycle Charts • Visual 5S • The Five Minute 5S • Standardization level checklist • 5S checklist • The five Whys and one How approach(5W1H) • Suspension • Incorporation • Use Elimination
Relevant procedures	May include but not limited to: • Assign 3S responsibilities • Integrate 3S duties into regular work duties • Check on 3S maintenance level • OHS measures such as signage, symbols / coding and labeling of workplace and equipment • Creating conditions to sustain your plans • Roles in implementation
Reporting	May include but not limited to: • verbal responses • data entry into enterprise database • brief written reports using enterprise report formats
Relevant personnel	May include but not limited to: • supervisors, managers and quality managers • administrative, laboratory and production personnel • internal/external contractors, customers and suppliers
Tools and techniques	May include but not limited to: • 5S slogans • 5S posters • 5S photo exhibits and storyboards • 5S newsletter • 5S maps • 5S pocket manuals • 5S department/benchmarking tours • 5S months • 5S audit • Awarding system • Big cleaning day • Patrolling system may include: ➢ Top management Patrol ➢ 5S Committee members and Promotion office Patrol ➢ Mutual patrol ➢ Self-patrol ➢ Checklist and Camera patrols

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge to: • Discuss the relationship between Kaizen elements. • Standardize and sustain 3S activities by applying appropriate tools and techniques.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • Elements of Kaizen • Ways to improve Kaizen elements • Benefits of improving kaizen elements • Relationship between Kaizen elements • The fourth pillar of 5S • Benefits of standardizing and sustaining 3S • Procedures for standardizing and sustaining 3S activities • Tools and techniques to sustain 3S • Relevant Occupational Health and Safety (OHS) and environment requirements • Plan and report • Method of communication
Underpinning Skills	Demonstrates skills of: • improving Kaizen elements by applying 5S • standardizing and sustaining procedures and techniques to avoid problems • technical drawing • procedures to standardizing 3S activities • analyzing and preparing shop layout of the workplace • standardizing and sustaining checklists • preparing and implementing tools and techniques to sustain 3S • working with others • reading and interpreting documents • observing situations • solving problems by applying 5S • communication skills • preparing labels, slogans, etc. • gathering evidence by using different means • using Kaizen board properly in accordance the procedure • reporting activities and results using report formats
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

NTQF Level III

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Prepare Chocolate and Chocolate Confectionery**
Unit Code	**IND COP3 01 0613**
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to handle chocolate, prepare individual chocolates and make chocolate-based confectionery. Chocolate includes covertures (pure coating chocolate) in dark, milk and white, and various compounds. Tempering is the technique to control formation of seed crystals and to achieve the desired characteristics in solidified chocolate, including setting properties, snap and sheen. Chocolate confectionery may be molded, cut or dressed, with hard or soft centers, hand coated, machine enrobed or made using prepared hollow shells.

Elements	Performance Criteria
1. Temper covertures	1.1 Melt and temper covertures using correct ***tempering technique*** and temperatures. 1.2 Manipulate covertures to the correct viscosity and desired flow properties so that it possesses appropriate color, gloss and snap characteristics on solidification. 1.3 Control the temperature to retain workable consistency.
2. Prepare centers and fillings	2.1 Choose and manipulate ingredients correctly demonstrating high standards of hygiene. 2.2 Prepare a range of ***centers and fillings*** according to standard recipes or enterprise specifications. 2.3 Select and make *fillings* that are full-flavored, interesting and natural. 2.4 Bring fillings to the correct temperature, viscosity and consistency before being used. 2.5 Ensure that shapes and sizes of centers are precise and uniform.
3. Handle moulds.	3.1 Ensure that moulds to be used are clean, polished and free of dust or residue. 3.2 Keep moulds constantly at the correct temperature when being used and ensure that they are untouched by bare fingers. 3.3 Ensure that the polished surface is never touched by objects that may dull, scratch or damage it.

4. Make molded chocolates	4.1 Select covertures or coatings appropriate to the filling and use. 4.2 Temper covertures correctly and set in moulds ensuring it is of even and correct thickness and free from marks or air bubbles. 4.3 Apply a range of fillings ensuring a level surface and allowing sufficient space for sealing with a layer of chocolate of appropriate thickness. 4.4 Handle and store de-molded chocolates so that they retain their glossy surface.
5. Coat chocolate confectionery.	5.1 Covertures are tempered and manipulated to the correct viscosity. 5.2 Items to be coated are brought to the correct temperature. 5.3 Prepared centers are coated using techniques ensuring an even and correct thickness of chocolate and a uniform quality finish. 5.4 Hand dipping is executed in a logical and accurate manner. 5.5 Chocolate confectionery is decorated and presented attractively.
6. Store chocolate and chocolate confectionery.	6.1 Chocolate and chocolate confectionery is stored at the correct temperature and level of humidity. 6.2 Chocolate and chocolate confectionery is protected from light and incompatible odors.

Variable	**Range**
Tempering techniques	May include • vaccination or addition method, tabling method, heated water jackets and microwave
Centers and fillings	may include • nougat • panache • marzipan • flavoured fondant • croquet • caramel • jellies • liqueurs • Nuts and fruits.

Evidence Guide	
Critical Aspects of Competency	Demonstrate skills and knowledge of: • detailed understanding of the different classifications of chocolate

	• ability to produce a quantity of chocolates which are consistent, neat, and even in size, shape and appearance • flair, innovation, creativity and artistic skills in creating, decorating and presenting chocolates
Underpinning Knowledge	Demonstrate knowledge of: • specific requirements for the handling of chocolate • culinary terms commonly used in the industry in relation to chocolate making • principles and practices of hygiene related to handling chocolate • past and current trends in chocolate and chocolate products
Underpinning Skills	Demonstrate skills to: • artistic skills and creative techniques for chocolate and chocolate confectionery • logical and time-efficient work flow • safe work practices, in particular in relation to bending, lifting and handling heated surfaces • problem-solving skills to deal with breakdowns in systems or equipment • literacy skills to research chocolate types, history and trends • numeracy skills to cost yields and portion control
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Operate a Confectionery Depositing Process**
Unit Code	**IND COP3 02 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required set up, operate, adjust and shut down a depositing process to deposit into solid or flexible moulds. This is sometimes known as starch less molding.

Elements	Performance Criteria
1. Prepare the depositing equipment and process for operation	1.1 Materials are confirmed and available to meet operating requirements. 1.2 Cleaning and maintenance requirements and status are identified and confirmed. 1.3 ***Typical equipment*** components and related attachments are fitted and adjusted to meet operating requirements. 1.4 Processing/operating parameters are entered as required to meet safety and production requirements. 1.5 Equipment performance is checked and adjusted as required. 1.6 Pre-start checks are carried out as required by workplace requirements. 1.7 Syrup is transferred to depositing equipment.
2. Operate and monitor the depositing process	2.1 The depositing process is started and operated according to ***workplace information*** procedures. 2.2 Equipment is monitored to identify variation in operating conditions. 2.3 ***Equipment operation*** variation in is identified and maintenance requirements are reported according to workplace reporting requirements. 2.4 The depositing process is monitored to confirm that specifications are met. 2.5 Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.6 The work area is maintained according to housekeeping standards. 2.7 Work is conducted in accordance with workplace environmental guidelines. 2.8 Workplace records are maintained according to workplace recording requirements.

3. Shut down the depositing process	3.1. The appropriate ***shutdown procedure*** is identified. 3.2. The process is shut down according to workplace procedures. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements .

Variable	**Range**
Typical equipment	may include: • a depositing hopper • nozzles and manifold • moulds • finishing equipment, such as blowing, oiling or sugaring • cooling tunnel • Related processes may include: • syrup preparation
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Equipment operation	may include: • the use of process control panels and systems
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)

Evidence Guide	
Critical Aspects of Competency	Must demonstrate knowledge and skills ability to: • conduct pre-start checks on machinery used for confectionery depositing • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of the depositing process, such as product preparation and conditioning requirements and product depositing

	• basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the depositing process and the effect of outputs on downstream processes • quality requirements of materials for depositing and effect of variation on depositing process performance and outputs • quality characteristics required of process outputs • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the depositing process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the depositing process and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls requirements of different shutdowns as appropriate to the depositing process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the depositing process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant

Underpinning Skills	Demonstrate skills to: • access workplace information to identify depositing processing requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, setting up depositor controls, cooling parameters and demoulding process to meet production requirements, cancelling isolation or lock outs as required, confirming that related equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • start, operate, monitor and adjust depositing process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as: ➢ the supply of syrup to hopper ➢ controlling weight of liquid deposited in mould ➢ visual inspections to identify faults, such as tailings and placement of liquid in mould ➢ pump stroke settings ➢ cooling tunnel temperature profile ➢ shrinkage/ demoulding process • monitor supply and flow of materials to and from the depositing process to confirm process remains within specification • set up and operate finishing equipment as required • demonstrate product changeover procedures • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take depositing process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures

	• clean and sanitise equipment according to enterprise procedures • use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Operate a Coating Application Process**
Unit Code	**IND COP3 03 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down processes to dust and apply coatings to product.

Elements	Performance Criteria
1. Prepare the coating process for operation	1.1 ***Coating materials*** are confirmed and available to meet operating requirement. 1.2 Cleaning and maintenance requirements and status are identified and confirmed. 1.3 Processing/operating parameters are entered as required to meet safety and production requirements. 1.4 Equipment performance is checked and adjusted as required. 1.5 Pre-start checks are carried out as required by workplace requirements.
2. Operate and monitor the coating process	2.1 The process is started and operated according to workplace procedures. 2.2 ***Coating application equipment*** is monitored to identify variation in operating conditions. 2.3 Variation in ***equipment operation*** is identified and maintenance requirements are reported according to workplace reporting requirements. 2.4. The process is monitored to confirm that specifications are met. 2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.6. The work area is maintained according to housekeeping standards. 2.7. Work is conducted in accordance with workplace environmental guidelines. 2.8. Workplace records are maintained according to ***workplace information*** recording requirements.
3. Shut down the coating process	3.1 The appropriate ***shutdown procedure*** is identified. 3.2. The ***coating process*** is shut down according to workplace procedures. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	Range
Coating materials	May include: • pre-dusts (usually finely ground) • grain-based material or dry batter • standard batters • tempura batter • wash batter • breeders, including flour, cracker meal, crumb, and marinades and glazes
Coating application equipment	may include: • dip-type batter applicators, • top curtain/underflow applicators (enrobes) • standard breeders (belt-based with compression roller), including single belt (non-flip) and flip applicators, • drum breeders
Operation of equipment	may include: • the use of process control panels and systems
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Shutdown procedures	may include: • Cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Coating processes	may include: • pre-dusting • batter and breading • application of marinades and glazes • These may be configured in sequence and/or involve multiple passes according to coating requirements Related processes may include: • batter preparation and crumb preparation

Evidence Guide	
Critical Aspects of Competency	demonstrate knowledge and skills to: • conduct pre-start checks on equipment used for product coating • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required

	• apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures.
Underpinning Knowledge	Demonstrate Knowledge of*:* • purpose and basic principles of coating, including coating process, process design and operation to achieve the coating requirements, related requirements of product and coating condition and equipment settings • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • quality characteristics to be achieved by the coating process • the flow of the coating process and the effect of product output on downstream processes • quality requirements of coating materials and product to be coated and effect of variation on process performance • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • techniques used to monitor the coating process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the process and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • product/process changeover procedures and responsibilities • isolation, lock out and tag out procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the coating process, including waste collection and handling procedures related to the process

	• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate skills to: • access workplace information to identify processing requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • prepare coating materials as required • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • start, operate, monitor and adjust coating equipment to achieve required outcomes (this will depend on the nature of coating materials),such as: ➢ condition of coating materials, such as checking grist/particle shape and size, checking for dough balls or lumps in flour-based breeders ➢ viscosity and temperature of batter-type breeders and glazes ➢ condition of product to be coated (this may include shape and temperature) ➢ product orientation/indexing ➢ conveyor positions and speeds ➢ drum speed ➢ compression roller settings (drum applicator) ➢ dip pond levels ➢ air blow off settings ➢ spread/evenness of coating • monitor supply and flow of materials to and from the coating process • take corrective action in response to out-of-specification results • conduct product/batch changeovers • report and/or record corrective action as required • locate emergency stop functions on equipment

	• follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • prepare equipment for cleaning • respond to and/or report equipment failure within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • prepare breeders and glazes according to enterprise procedures • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitise equipment according to enterprise procedures • use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Implement and Review the Processing of Chocolate and Sugar-Panned Products**
Unit Code	**IND COP3 04 0613**
Unit Descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for manufacture of chocolate and sugar-panned products.

Element	Performance criteria
1. Prepare for the manufacture of chocolate and sugar-panned products.	1.1 The statutory compositional ***OHS requirements*** for the different types of chocolate and sugar-panned products is established 1.2 The required formulation of ***chocolate and sugar-panned products*** is selected. 1.3 The appropriate production system and the preferred sequence of activity to prepare the system for operation are selected. 1.4 Equipment is prepared and safe operating procedures accessed for its operation
2. Monitor the preparation and manufacture of chocolate and sugar-panned products to ensure quality standards are met.	2.1 A production schedule is implemented to ensure all resources and requirements are available and meet company requirements. 2.2 Production system is set to operating specifications before and during production. 2.3 Data requirements and collection points appropriate for food safety, quality and production standards are documented 2.4 Procedures are developed to deal with non-conformance in relation to process and the final product. 2.5 Concentration and drying procedures are implemented and monitored 2.6 Process controls are monitored for chocolate and sugar-panned products.
3. Diagnose, rectify and/or report problem arising from the manufacture of chocolate and sugar-panned products	3.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of product 3.2 Identified adjustments are implemented to inputs, process and equipment. 3.3 Problems are reported to designated person according to company ***policies and procedures***.

Variable	Range
OHS requirements	May include: • legislation, regulations, Codes of practice • Safety Data Sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Chocolate and sugar-panned products	May include: • These include all products produced by a panning • process including panned nuts, moulded chocolate balls and discs, gum, jelly beans and nougat balls
Policies and procedures	May include: • Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.

Evidence Guide	
Critical Aspects of Competency	Demonstrate knowledge and skills to: • Critical aspects of assessment must include evidence of the ability to produce chocolate and sugar-panned products to specification including: ➢ implementing process control procedures and data collection; ➢ diagnosing and reporting problems for manufacturing; ➢ carrying out sensory evaluation and product testing; and ➢ reviewing the production system for food safety and quality and environmental impact
Underpinning Knowledge	Demonstrate Knowledge of: • the types of chocolate and sugar panned products, their formulation, and the type of coating process used in their production • the relevant properties of the various centres used in panned products, including melting point, moisture content, shape, size, surface finish and preparation • crystallisation behaviour of fats, sugars and sugar substitute materials • the effect of air flow, air temperature and air humidity on the drying/setting rates of coatings and the relationship to product characteristics • polishing materials and methods and their application • production systems used for the production of panned products including types of coating pans, methods of coating material addition and process air supply requirements • the production system for the preparation and manufacture of chocolate and sugar-panned products including production instruction, quality assurance requirements and or/specifications, production specification and or/standards,

	production equipment, production procedures, cleaning procedures and materials and raw materials • critical factors in the preparation and manufacture of chocolate and sugar-panned products • resource requirements for the preparation and manufacture of chocolate and sugar-panned products • potential product defects and their causes, which may arise in the preparation and manufacture of chocolate and sugar-panned products • stages of production, CCPs and critical limits • packaging procedures • quality and continuous improvement processes • sensory analysis techniques • safe systems of work
Underpinning Skills	Demonstrate skills to: • interpret market specifications for chocolate and sugar-panned products • Plan production processes to manufacture chocolate and sugar-panned products. • monitor the output of each of the processes used in the preparation and manufacture of chocolate and sugar-panned products • implement production systems for preparation and manufacture of chocolate and sugar-panned products • recognise the organoleptic properties of different types of chocolate and sugar-panned products • operate equipment and accessories used in the preparation and manufacture of chocolate and sugar-panned products
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Operate a Chocolate Tempering Process**
Unit Code	**IND COP3 05 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a tempering process used to temper chocolate.

Elements	Performance Criteria
1. Prepare the tempering equipment and process for operation	1.1. Chocolate for tempering is confirmed and available to meet operating requirements. 1.2. Cleaning and maintenance requirements and status are identified and confirmed. 1.3. Processing/operating parameters are entered as required to meet safety and production requirements. 1.4. Equipment performance is checked and adjusted as required. 1.5. Pre-start checks are carried out as required by workplace requirements.
2. Operate and monitor the tempering process	2.1. The process is started and operated according to workplace procedures. 2.2. Equipment is monitored to identify variation in ***operating*** conditions. 2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 2.4. The process is monitored to confirm that tempering specifications are met. 2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.6. The work area is maintained according to housekeeping standards. 2.7. Work is conducted in accordance with workplace environmental guidelines. 2.8. ***Workplace information*** is and maintained according to workplace recording requirements.

3. Shut down the tempering process	3.1. The appropriate ***shutdown procedure*** is identified. 3.2. The process is shut down according to workplace ***policies and procedures***. 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements .

Variable	**Range**
Operation	May include: • the use of process control panels and systems
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Policies and procedures	May include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements

Evidence Guide	
Critical Aspects of Competency	Must demonstrate knowledge and skills ability to: • conduct pre-start checks on machinery used for chocolate tempering • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures.
Underpinning Knowledge	Demonstrate Knowledge of***:*** • purpose and basic principles of the tempering process, including: ➢ basic understanding of the crystallisation behaviour of cocoa fat ➢ relationship between crystal forms and melting points/temperatures

	➢ process stages, such as heating, cooling, agitating, reheating and effect of each of these on outcomes • basic operating principles of equipment, including main equipment components, temperature zones, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the tempering process and the effect of outputs on downstream processes • quality characteristics required of chocolate for tempering and the effect of variation on tempering process performance • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the tempering process, including temper test procedures and the significance of results for tempering process adjustments • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks associated with the tempering process and related control measures • common causes of variation and corrective action required • OHS hazards and controls requirements of different shutdowns as appropriate to the tempering process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the tempering process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant

Underpinning Skills	Demonstrate skills to: • access workplace information to identify tempering process requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary materials and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • start, operate, monitor and adjust tempering process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as: ➢ setting pump speeds ➢ checking temperature/zone settings ➢ checking chocolate temperatures • monitor supply and flow of materials to and from the tempering process and equipment operation to confirm process remains within specification • demonstrate product/batch changeovers • conduct temper test, interpret results and determine adjustments as required • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take tempering process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitise equipment according to enterprise procedures • use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor

	• work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Perform Basic Tests**
Unit Code	**IND COP3 06 0613**
Unit Descriptor	This unit of competency covers the ability to perform tests and measurements using standard methods with access to readily available advice from supervisors.

Elements	Performance Criteria
1. Interpret test requirements	1.1. Test request is reviewed to identify samples to be tested, test method and equipment involved. 1.2. Hazards and enterprise controls associated with the sample, preparation methods, reagents and/or equipment are identified.
2. Prepare sample	2.1. Sample description is recorded, and compared with specification, and discrepancies are recorded and reported. 2.2. Sample is prepared in accordance with appropriate standard methods.
3. Check equipment before use	3.1. Test equipment is set up in accordance with test method. 3.2. Pre-use and safety checks are performed in accordance with enterprise procedures and manufacturer's instructions. 3.3. Faulty or unsafe equipment is identified and reported to appropriate personnel. 3.4. Calibration status of equipment is checked and any out of calibration items are reported to appropriate personnel.
4. Perform tests on samples	4.1. Sample and standards to be tested are identified, prepared and weigh or measured. 4.2. Tests are conducted in accordance with enterprise procedures. 4.3. Data is recorded in accordance with enterprise procedures. 4.4. Calculations on data are performed as required. 4.5. Out of specification or atypical results is/are identified and reported promptly to appropriate personnel. 4.6. Equipment is shut down in accordance with operating procedures.
5. Maintain a safe work environment	5.1. Established safe work practices and personal protective equipment are used to ensure personal safety and that of other laboratory personnel. 5.2. The generation of wastes and environmental impacts is minimized.

	5.3. Safe disposal of laboratory and hazardous wastes is ensured. 5.4. Equipment and reagents are cleaned, cared for and stored as required.

Variable	Range
Codes of practice	Where reference is made to industry codes of practice, and/or Ethiopian/international standards, it is expected the latest version will be used
Standards**,** codes**,** procedures and**/**or enterprise requirements	May include: • Ethiopian and international standards, such as: ➢ The international system of units (SI) and its application ➢ General requirements for the competence of testing and calibration laboratories ➢ Safety in laboratories set ➢ Ethiopian code of good manufacturing practice for medicinal products (GMP) ➢ calibration and maintenance schedules ➢ enterprise recording and reporting procedures ➢ equipment manuals ➢ equipment start-up, operation and shutdown procedures ➢ MSDS and safety procedures ➢ material, production and product specifications ➢ national measurement regulations and guidelines ➢ principles of good laboratory practice (GLP) ➢ production and laboratory schedules ➢ quality manuals ➢ Standard Operating Procedures (SOPs)
Concepts of metrology	may include: • that all measurements are estimates • measurements belong to a population of measurements of the measured parameters • repeatability • precision • accuracy • significant figures • sources of error • uncertainty and traceability
Preparation of samples	may include: • sub-sampling or splitting using procedures, such as riffling, coning and quartering, manual and mechanical splitters • diluting samples • physical treatments, such as ashing, dissolving, filtration, sieving, centrifugation and comminution • moulding, casting or cutting specimens

Typical tests carried out by laboratory/field assistants	may include: • visual/optical tests of appearance, colour, texture, identity, turbidity, refractive index (alcohol content and Baume/Bricks) • physical tests: • density, specific gravity and compacted density • moisture content and water activity • particle size, particle shape and size distribution • chemical tests: • gravimetric • colorimetric • electrical conductivity (EC) and pH • specific ions using dipsticks and kits • nutrients (e.g. nitrates and orthophosphates) using basic kits • ashes, including sulphated ashes • biological/environmental tests: • pH, Oxygen Reduction Potential (ORP), Dissolved Oxygen (DO) and (EC) • E coli using test kits • surface hygiene/presence of microbes • packaging tests: • tearing resistance, bursting strength and impact resistance • permeability and/or leakage • mechanical tests: • Emerson class • concrete slump
Measurements	may include: • simple ground surveys • meteorological parameters, such as wind direction/strength, rainfall, maximum/minimum temperature, humidity and solar radiation • simple background radiation survey • production/process parameters, such as temperature, flow and pressure • gas levels in a confined space
Common measuring equipment	may include: • dimension apparatus • DO and EC • analogue and digital meters and charts/recorders • basic chemical and biological test kits • dipsticks and site test kits (e.g. HACK) • timing devices • temperature measuring devices, such as thermometers and thermocouples

Hazards	may include: • electric shock • biohazards, such as microbiological organisms and agents associated with soil, air, water, blood and blood products, and human or animal tissue and fluids • solar radiation, dust and noise • chemicals, such as sulphuric acid, fluorides and hydrocarbons • aerosols • sharps, broken glassware and hand tools • flammable liquids • dry ice and liquid nitrogen • fluids under pressure • sources of ignition • occupational overuse syndrome, slips, trips and falls • manual handling, working at heights and working in confined spaces • crushing, entanglement and cuts associated with moving machinery or falling objects
Enterprise controls to address hazards	may include: • use of MSDS • use of signage, barriers and service isolation tags • use of personal protective equipment, such as hard hats, hearing protection, sunscreen lotion, gloves, safety glasses, goggles, face guards, coveralls, gowns, body suits, respirators and safety boots • use of appropriate equipment, such as biohazard containers and cabinets and laminar flow cabinets • recognising and observing hazard warnings and safety signs • labelling of samples, reagents, aliquoted samples and hazardous materials • handling and storage of all hazardous materials and equipment in accordance with labelling, MSDS and manufacturer's instructions, and enterprise procedures and regulations • cleaning and decontaminating equipment and work areas regularly using recommended procedures • following established manual handling procedures for tasks involving manual handling
Minimizing environmental impacts	may include: • recycling of non-hazardous waste, such as chemicals, batteries, plastic, metals and glass • appropriate disposal of hazardous waste • correct disposal of excess sample/test material • correct storage and handling of hazardous chemicals

Occupational Health and Safety (OHS) and environmental management requirements	may include: • all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through federal legislation - these requirements must not be compromised at any time • all operations assume the potentially hazardous nature of samples and require standard precautions to be applied • where relevant, users should access and apply current industry understanding of infection control issued by the Ethiopian Health and Nutrition Research Institute

Evidence Guide	
Critical Aspects of Competency	Assessors should ensure that candidates can: • accurately interpret enterprise procedures or standard methods • complete all tests within the required timeline without sacrificing safety, accuracy or quality • demonstrate close attention to the accuracy and precision of measurements and the data obtained • maintain the security, integrity and traceability of all samples, data/results and documentation
Underpinning Knowledge	Required knowledge includes: • concepts of metrology • the International System of units (SI) • purpose of test • principles of the standard method • pre-use equipment checks • relevant standards/specifications and their interpretation • sources of uncertainty in measurement and methods for control • enterprise and/or legal traceability requirements • interpretation and recording of test result, including simple calculations • procedures for recognition/reporting of unexpected or unusual results • relevant health, safety and environment requirements
Underpinning Skills	Required skills include: • interpreting enterprise procedure or standard methods accurately • using safety information, such as material safety data sheets (MSDS) and performing procedures safely • checking test equipment before use • completing all tests within required timeline without sacrificing safety, accuracy or quality • calculating, recording and presenting results accurately and legibly

	• maintaining security, integrity and traceability of all samples, data/results and documentation • cleaning and maintaining equipment
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Apply Raw Materials, Ingredient and Process Knowledge to Production Problems**
Unit Code	**IND COP3 07 0613**
Unit Descriptor	This unit of competency covers skills and knowledge required to apply knowledge of ingredients and processes to troubleshoot typical problems that occur in preparing, processing and/or packaging product.

Elements	Performance Criteria
1. Identify and respond to non-conforming ingredients/raw materials	1.1. Non-conformance in ***raw materials/ingredients*** is identified and reported according to workplace reporting requirements. 1.2. Causes of non-conformance are investigated and reported according to workplace reporting requirements. 1.3. Corrective action is determined and implemented within level of responsibility and workplace procedures. 1.4. Action is taken to prevent recurrence of non-conformance. 1.5. Action is reported according to workplace reporting requirements.
2. Identify and respond to non-conforming product and processes	2.1. ***Processing parameters****,* stages and changes which occur during processing are monitored. 2.2. Non-conformance in ***processing and related techniques***, handling and/or storage is identified and corrective action taken according to workplace requirements. 2.3. Causes of non-conformance relating to processing, handling and/or storage are investigated and reported according to workplace reporting requirements. 2.4. Corrective action is determined and implemented within level of responsibility and workplace ***policies and procedures****.* 2.5. Action is taken to prevent recurrence of non-conformance. 2.6. Action is reported according to workplace reporting requirements. 2.7. Work is conducted in accordance with workplace environmental guidelines.

Variable	Range
Ingredients**/**raw materials	May include: • are those used to manufacture product
Process parameters	May include: • temperature

	• time • pressure and flow rate
Processing and related techniques	May include: • raw materials/ingredient dispensing • preparation • mixing and blending • conditioning • primary and further processing • wrapping • packing and storage
Policies and procedures	Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.

Evidence Guide	
Critical Aspects of Competency	Must demonstrate ability to: • describe required quality characteristics for raw materials and ingredients • describe required processes to achieve production specifications • identify common non-conforming materials and ingredients and causes • identify common non-conforming processes and causes • determine and undertake corrective action for non-conformances • complete workplace documentation and report non-conformances • Apply food safety procedures.
Underpinning Knowledge	Demonstrate Knowledge of: • basic composition and function of each main raw material/ingredient used, such as awareness of ingredient grades or types • common causes of contamination/unacceptable quality of raw materials/ ingredients • methods used to confirm quality standard, such as accessing information (e.g. certificates of analysis and/or laboratory clearance information) • the effect of variation in raw materials/ingredients on processing stages and final product outcome, including factors likely to cause variation, and scope to adjust or correct for variation at each processing stage • appropriate handling and storage requirements for raw materials/ingredients and final product, and the effect of failing to meet required storage conditions

	• the changes and reactions that occur through processing stages, including the signs and symptoms of poor/unacceptable processing or equipment operation • factors that affect the shelf-life of product • the inter-relationships between processing stages and the effect of variation in processing parameters on process outcome and on final product, including factors likely to cause variation, and scope to adjust or correct for variation at subsequent process stages • procedures for identifying and isolating non-conforming product • troubleshooting information and techniques • procedures and related documentation required to amend or introduce a new method or procedure, such as short term procedures for amending or updating specifications and processing parameters • reporting requirements and responsibilities • test methods to confirm raw material/ingredient and/or final product quality characteristics where relevant
Underpinning Skills	Demonstrate skills to: • identify requirements of ingredient/raw material characteristics within level of responsibility • follow procedures to identify, remove/isolate and report non-conforming ingredients/materials and/or product according to workplace reporting requirements • determine likely causes of non-conformance of ingredients/raw materials • recognise indicators of unacceptable or non-conforming processing, handling and/or storage outcomes • act promptly to identify, remove/isolate and report non-conforming product and/or processes • access and apply workplace information relating to process troubleshooting • investigate non-conformance to determine likely causes and report findings to appropriate personnel • identify action required to correct non-conformance and implement within level of responsibility • identify action required to prevent or minimise and control recurrence of non-conformance and implement within level of responsibility • complete workplace records, including reporting non-conformance and documenting corrective actions according to workplace recording procedures • conduct tests to confirm raw material/ingredient and/or final product quality characteristics according to enterprise procedures

	• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Operate a Chocolate Refining Process**
Unit Code	**IND COP3 08 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a chocolate mixing and refining process.

Elements	Performance Criteria
1. Prepare and mix ingredients	1.1. Ingredients are confirmed and available to meet operating requirements. 1.2. Mixing processing/operating parameters are entered as required to meet safety and production requirements. 1.3. Ingredients and additives are delivered to the mixer in the required quantities and sequence to meet recipe specifications. 1.4. The mixing process is started and operated according to workplace procedures. 1.5. Equipment is monitored to identify variation in operating conditions. 1.6. Variation in ***equipment operation*** is identified and maintenance requirements are reported according to workplace reporting requirements. 1.7. The mixing process is monitored to confirm that specifications are met. 1.8. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification.
2. Prepare the refining equipment and process for operation	2.1. Mix is made available to meet operating requirements. 2.2. Cleaning and maintenance requirements and status are identified and confirmed. 2.3. Machine components and related attachments are fitted and adjusted to meet operating requirements. 2.4. Processing/operating parameters are entered as required to meet production requirements. 2.5. Equipment performance is checked and adjusted as required. 2.6. Pre-start checks are carried out as required by workplace requirements.

3. Operate and monitor the refining process	3.1. The ***refining and related equipment*** process is started and operated according to workplace procedures. 3.2. Equipment is monitored to identify variation in operating conditions. 3.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 3.4. The process is monitored to confirm that specifications are met. 3.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 3.6. The work area is maintained according to housekeeping standards. 3.7. Work is conducted in accordance with workplace environmental guidelines. 3.8. ***Workplace information*** records are maintained according to workplace recording requirements.
4. Shut down the refining process	4.1. The appropriate ***shutdown procedure*** is identified. 4.2. The process is shut down according to ***workplace policies procedures***. 4.3. Maintenance requirements are identified and reported according to workplace reporting requirements.

Variable	Range
Operation of equipment	may include: • the use of process control panels and systems
Refining and related equipment	may include: • bulk materials handling equipment • continuous or batch mixers/kneaders • pre-refiners and refiners • conveyor systems
Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)

Policies and procedures	may include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • conduct pre-start checks on machinery used for refining chocolate • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures to work practices.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of mixing and refining chocolate, including: ➢ processing stages in chocolate making and the role of mixing, refining and pre-refining as appropriate ➢ ingredients used in chocolate and those introduced during refining, such as ingredients in different types of chocolate as appropriate to production requirements and an understanding of the quality requirements and role of each main ingredient ➢ changes that occur in ingredients during mixing and refining ➢ significance of particle size for product characteristics • basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation • services required and action to take if services are not available • the flow of the mixing and refining process and the effect of outputs on downstream processes • quality requirements of ingredients used and effect of variation on process performance and outputs • quality characteristics required of the refined mass • operating requirements and parameters and corrective action required where operation is outside specified operating parameters

	• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems • methods used to monitor the mixing and refining process, such as inspecting, measuring and testing as required by the process • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/food safety risks and related control measures • common causes of variation and corrective action required • Occupational Health and Safety (OHS) hazards and controls • requirements of different shutdowns as appropriate to the mixing and refining process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage • isolation, lock out and tag out procedures and responsibilities • product/process changeover procedures and responsibilities • procedures and responsibility for reporting production and performance information • environmental issues and controls relevant to the mixing and refining process, including waste/rework collection and handling procedures related to the process • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment • sampling and testing associated with process monitoring and control where relevant • routine maintenance procedures where relevant • cleaning and sanitation procedures where relevant
Underpinning Skills	Demonstrate skills to: • access workplace information to identify mixing and refining process requirements • select, fit and use personal protective clothing and/or equipment • confirm supply of necessary ingredients and services • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings to achieve required particle size, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational • sequence ingredient addition to the mixer to meet recipe specifications

	• start, operate, monitor and adjust process equipment to achieve required outcomes, including setting dosing/metering and related addition systems, loading or controlling loading of bulk ingredients, monitoring control points and conducting inspections as required to confirm process remains within specification • monitor process, including: ➢ ingredient addition sequence ➢ mix times ➢ throughput to refiner ➢ roller gap/particle size • monitor supply and flow of materials to and from the mixing and refining • demonstrate changeover procedures • take corrective action in response to out-of-specification results • respond to and/or report equipment failure within level of responsibility • locate emergency stop functions on equipment • follow isolation and lock out/tag out procedures as required to take refining process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility • complete workplace records as required • maintain work area to meet housekeeping standards • use process control systems according to enterprise procedures • collect samples and conduct tests according to enterprise procedures • conduct routine maintenance according to enterprise procedures • clean and sanitise equipment according to enterprise procedures • use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Monitor the Implementation of Quality and Food Safety Programs**
Unit Code	**IND COP3 09 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to provide a leadership role in supporting day-to-day implementation of the food safety/quality programs in a work area. It also involves supporting others to implement the requirements of the food safety/quality procedures.

Elements	Performance Criteria
1. Ensure others in the work area are able to meet quality and food safety requirements	1.1. Hazard control and clothing and equipment appropriate to work requirements are made available, functional and correctly fitted. 1.2. Information on food safety/quality ***work responsibilities*** and procedures is made current, accessible and communicated to others in the work area. 1.3. Information about identified hazards and the outcomes of risk assessment and risk control procedures is made accessible and communicated to others in the work area. 1.4. Food safety/quality hazards and control measures used in the work area can be identified by those in the work area. 1.5. Mentoring and coaching support is made available to support individuals/groups to implement quality and safe food handling procedures. 1.6. Training needs are identified and addressed within level of responsibility.
2. Monitor observance of quality standards and food safety programs in the work area	2.1. Work procedures in the work area are clearly defined, documented and followed. 2.2. Deviation from identified procedures is identified, reported and addressed within level of responsibility. 2.3. Personal behavior is made consistent with workplace policies and procedures that support food safety and ***quality system***. 2.4. Food safety and/or quality hazards are identified and reported according to workplace procedures. 2.5. Food safety and quality information is recorded to meet workplace reporting requirements. 2.6. The work area is maintained according to housekeeping standards. 2.7. Work is conducted in accordance with workplace environmental guidelines.

3. Take corrective action in response to quality and food safety non-compliance	3.1. Workplace procedures are promptly implemented for responding to quality and food safety ***non-compliance against quality standards***. 3.2. Hazardous events are investigated to identify cause. 3.3. Control measures are implemented to prevent recurrence and minimize risks of hazardous events.
4. Maintain and improve quality and food safety in the work area	4.1. Processes or conditions which could result in ***a breach of food safety procedures*** or quality specifications are identified, assessed, removed or/are reported within level of responsibility and according to workplace procedure. 4.2. Risk assessments are conducted and appropriate control measures are identified and implemented in the work area. 4.3. Recommendations arising from risk assessments are implemented within level of responsibility. 4.4. Inadequacies in control measures are identified and reported according to company reporting requirements. 4.5. Matters raised relating to quality/food safety are promptly resolved and/or referred to appropriate personnel. 4.6. The work group is consulted and advised of quality/food safety matters relevant to work role. 4.7. Opportunities for improving food safety and quality are identified and raised with relevant personnel. 4.8. Procedures are developed or revised to support effective control of quality and food safety hazards. 4.9. Quality/food safety records are reviewed to ensure they are complete and meet the quality system, ***food safety program*** and legal requirements.

Variable	**Range**
Work responsibilities	May include: • Work responsibilities may include formal or informal responsibility for modeling appropriate quality/food safety policies and procedures and providing a support role to others in the work area
Quality systems	May include quality systems may be externally accredited, such as an ISO system, or internally designed and managed
Non-compliance against quality standards	May include: • Responsibility for identifying non-compliance against quality standards occurs within the context of defined standards or specifications and relates to work area

Breaches of food safety procedures	May include: • Responsibility for identifying breaches of food safety procedures and taking corrective action occurs in the context of the food safety program and within scope of responsibility
Food safety program	May include: • A food safety program is a written document that specifies how a business will control all food safety hazards that may be reasonably expected to occur in all food handling operations of the food business. The food safety program and related procedures must comply with legal requirements of the food safety standards and must be communicated to all food handlers. Where no food safety program is in place, food safety requirements may be specified in general operating procedures
Incidents	May include: • a situation where the safe limits or parameters identified by the food safety program are not met • A quality incident is: • a situation where the quality limits or parameters identified in specifications or processing instructions are not met
Monitoring	May include: • Monitoring describes the methods used to confirm that a food safety or quality hazard is in control, such as: ➢ taking temperatures ➢ collecting samples ➢ conducting visual inspections ➢ additional testing as required
Workplace information	May include: • Workplace information may be provided in: • food safety and quality policies and programs • Standard Operating Procedures (SOPs) • specifications • log sheets • written or verbal instruction incorporating food safety and quality requirements
Personal hygiene requirements	May include minimum personal hygiene requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in the Food Safety Standard 3.2.2, Division 4:14 and/or state or territory legislation/regulations
Reporting of health conditions and illnesses	May include: • Reporting of health conditions and illnesses requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in Food Safety Standard 3.2.2, Division 4:13 and/or state or territory legislation/regulations

Operator responsibilities	May include: • The operator at this level may not have direct responsibility for overseeing the training/development of team members. At a minimum they must be able to identify development needs of others in the work area and refer this information to the relevant personnel. • The operator at this level may not have responsibility for independently assessing risks and determining the effectiveness of control measures. However, they would be expected to observe day-to-day effectiveness and participate in assessment and review processes. Responsibilities at this level may include facilitating consultation processes within level of responsibility
Record keeping	May include record keeping complies with customer, legal and food safety program requirements

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • describe quality and food safety program, risks and control measures of the work area • confirm that control measures are in place and that personnel in the work area are equipped and informed to implement programs • identify, address and follow up on non-compliances • identify causes of non-compliances • conduct risk assessments and recommend responsive action • provide support to others to implement the programs • Complete and maintain documentation.
Underpinning Knowledge	Demonstrate Knowledge of: • sources of information and expertise on procedures and responsibilities for food safety relevant to the workplace • principles of a HACCP-based approach to managing food safety, including identifying hazards that are likely to occur, establishing appropriate methods of control and confirming that controls are met • basic concepts of quality assurance including hazards, risk assessment and control methods • company programs and systems in place to manage and support quality and food safety in the workplace, which may involve separate or integrated programs, including systems for maintaining and updating documents, such as operating procedures and specifications • clothing and footwear requirements for working in and/or moving between food handling areas, including personal clothing maintenance, laundering and storage requirements

	• appropriate bandages and dressings to be used when undertaking food handling • housekeeping requirements and responsibilities relating to own work, where relevant this includes use and storage of housekeeping/cleaning equipment • procedures to follow in the event of pest sighting or discovery of infestation • purpose and importance of cleaning and sanitation procedures • legal obligations for food safety and quality, including an awareness of government legislation and customer requirements • food safety and quality responsibilities and requirements relating to the work area • awareness of common micro biological, physical and chemical hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences and control methods to prevent occurrence • suitable standard for materials, measuring devices, equipment and utensils used in the work area • properties of food and ingredients used that affect food safety, including an understanding of related storage, processing and handling requirements • current technical and process knowledge required to participate in investigations of food safety/quality hazards, risks and incidents within level of responsibility, including an understanding of common micro biological, physical and chemical hazards, related control methods and the way changes in equipment and/or processing methods can affect food safety and quality outcomes • procedures for identifying unsafe and/or non-conforming product, including control points and evidence of out-of-specification product or materials • sampling procedures, test methods and inspections • options for responding to non-compliance, including legal responsibility, risk management and cost/implications of different responses and level of responsibility for decision making • methods used in the workplace to isolate or quarantine food which may be unsafe • waste collection, recycling, handling and disposal, including handling/disposal requirements for different types of waste, such as hazardous waste where relevant • traceability and recall procedures within level of responsibility

	• documentation system and procedures, including record keeping to meet both company and legal requirements, procedures for developing and/or reviewing workplace procedures, and document control systems used in the workplace • auditing arrangements, roles and responsibilities as they relate to own work responsibilities, such as internal and external audit processes • appropriate communication skills and techniques to convey information on quality and food safety requirements to others in the workplace • cleaning and sanitation procedures where relevant • impact of rework handling/addition on food safety where relevant • sampling and test methods where relevant • facilitation and consultation techniques where relevant
Underpinning Skills	Demonstrate skill to: • access, interpret and communicate information about the food safety program, quality requirements and related procedures to others in the work area • demonstrate two-way communication, including active listening and responding constructively to feedback • provide access to and maintain current food safety/quality documentation • model safe food handling and quality practices and procedures to achieve required outcomes, including demonstrating: ➢ work procedures that meet the requirements of quality and food safety ➢ cleaning and sanitizing equipment ➢ sampling and testing as appropriate according to quality and food safety requirements ➢ maintaining personal hygiene ➢ wearing appropriate clothing and footwear as required by the work task ➢ following procedures when moving within and between work areas ➢ reporting health conditions and illnesses according to workplace procedures ➢ handling, cleaning and storing equipment, utensils and packaging materials as appropriate • identify control points in the work area and demonstrate monitoring techniques used (control points include critical, quality and regulatory control points) • support others to meet quality standards and follow food safety procedures by ensuring that all personnel in the work area

	receive the information required and have the necessary skills and equipment to carry out their responsibilities • identify, report and/or address food safety/quality non-compliance in an appropriate and timely manner within level of responsibility • determine when and how to make adjustments to maintain output within level of responsibility • identify, report and/or address food safety/quality training and development needs of others in the work area • ensure that appropriate and timely action is taken in response to non-compliance • handle and dispose of out-of-specification or contaminated food, waste and recyclable material according to food safety program as this requirement relates to own work responsibility • participate in investigations of non-compliance and risk assessment processes • participate in consultation processes to improve quality and food safety outcomes in the workplace • review practice and procedures to implement recommendations arising from risk assessments and/or improvement proposals within level of responsibility, such as collecting and analysing food safety/quality records, reviewing operating procedures and communicating changes to others in the work area • ensure that housekeeping standards are maintained and that equipment is in operational order, such as participating in the management of equipment calibration • monitor the recording of quality and food safety information to confirm that records accurately reflect performance and meet the requirements of the food safety and quality programs • participate in food recall procedures as required, within level of responsibility • facilitate consultation processes according to enterprise procedures • lead investigations of quality and food safety incidents according to enterprise procedures • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Operate Interrelated Processes in a Production System**
Unit Code	**IND COP3 10 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to set up, operate and adjust interrelated processes in a production system.

Elements	Performance Criteria
1. Prepare the production system for operation	1.1. Equipment, materials and services are confirmed and available to meet production requirements. 1.2. Cleaning requirements and equipment status are identified and confirmed. 1.3. Machine settings are selected or adjusted as required to meet safety and production requirements. 1.4. Processing/operating parameters are entered as required to meet production requirements. 1.5. Materials, ingredients and/or product are loaded or positioned as required to meet production requirements. 1.6. Pre-start checks are carried out as required by workplace requirements. 1.7. Equipment performance is checked and adjusted as required. 1.8. Equipment is made ready and safe to operate.
2. Operate and monitor the production system	2.1. The ***system*** is started up and operated according to company procedures. 2.2. ***System equipment*** components are monitored to identify variation in operating conditions. 2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements. 2.4. The production system is monitored to confirm that specifications are met. 2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification. 2.6. The work area is maintained according to housekeeping standards. 2.7. Work is conducted in accordance with workplace environmental guidelines.

3. Hand over production system operation	3.1. Workplace records are maintained according to workplace recording requirements. 3.2. ***Handover*** is carried out according to workplace procedures. 3.3. Process operators are made aware of system and related equipment status at completion of handover.
4. Shut down the production system	4.1. The appropriate ***shutdown procedure*** is identified. 4.2. The system is shut down according to workplace procedures. 4.3. Maintenance requirements are identified and reported.
5. Contribute to continuous improvement of the production system	5.1. System performance is reviewed against output plan/targets. 5.2. Opportunities are identified and investigated for system improvement. 5.3. Proposals are developed and implemented for improvement within company planning arrangements, authority levels and according to company procedures.

Variable	**Range**
Systems	may include: • a series of interrelated processes that must be coordinated and concurrently operated to produce the required outcome
System equipment	may include: • the use of control panels and systems
Handovers	may include: • in person or via recording/communication systems according to workplace arrangements
Shutdown procedures	may include: • cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)
Policies and procedures	may include: • Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative requirements	may include: • relevant to this industry includes: • the Food Standards Code, including labelling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity • When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply in place of the Food Standards Code and reference to food safety is replaced by GMP

Workplace information	may include: • Standard Operating Procedures (SOPs) • specifications • production schedules and instructions • performance records and reports
System operation	may involve: • coordination of operators of system components
Confirming cleaning requirements and status	may include: • accessing cleaning records

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • conduct pre-start checks on production system components • confirm machine setup is ready to achieve production requirements • correctly use required personal protective equipment • start, operate, monitor and adjust process equipment throughout the system to achieve required quality outcomes • identify system problems and take corrective action • conduct operational handovers • shut down system • identify and investigate opportunities for operational improvements within areas of responsibility • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • Apply food safety procedures.
Underpinning Knowledge	Demonstrate Knowledge of: • purpose and basic principles of the production system, including the system process flow, the interrelationships of each process to identify the impact of variation on related processes, and optimisation options • basic operating principles of equipment and related accessories used by the system, including equipment adjustment points, status and purpose of guards, and range and location/alignment requirements of sensors and related feedback instruments • operating capacities of equipment used in the system, such as different types of equipment and/or components as required by processing/packaging operations • related systems and responsibilities for interaction, such as related production systems, services supply, packaging/warehousing, maintenance, laboratory/quality assurance and planning and scheduling

	• product characteristics and common types of variation in materials and/or ingredients used, including the effect of variation on each stage of the system and scope to adjust or correct • typical production related problems, including equipment faults, common causes and warning signs, incorrect or poor supply of materials, incorrect settings and poor operator control • relevant procedures, specifications and operating parameters for the system and the individual processes • isolation, lock out and tag out procedures and responsibilities • hazards, risks, controls and methods for monitoring processes within the system, including Occupational Health and Safety (OHS), food safety, quality and environmental hazards and risks • workplace system and approach to equipment maintenance • process improvement procedures and related consultative arrangements • troubleshooting procedures and problem solving techniques • communication responsibilities to inform related work areas/support functions and other shifts of operational status and production issues • procedures and responsibility for reporting production and performance information
Underpinning Skills	Demonstrate skill to: • access production schedule and related information to identify system output and operating requirements, such as planning daily production schedules and/or modifying plans to respond to operating conditions and customer requirements • liaise with relevant work areas to confirm and/or secure necessary materials, services, equipment and labour to meet production requirements • confirm supply of necessary equipment and related attachments, materials and services • select, fit and use personal protective clothing and/or equipment • set and/or adjust equipment to meet process output requirements, including inspecting equipment condition to identify any signs of wear, confirming selection of appropriate settings and/or related parameters, ensuring that isolation or lock outs are cancelled as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational (checks may be done by the system operator or involve observing/supporting others setting and adjusting equipment and conducting pre-start checks)

	• load and/or position materials, ingredients and/or product as required • operate and monitor the production system, such as use of a process control system and/or observing/supporting others to follow correct operating procedures • monitor materials flow and work-in-progress through the system • confirm that the system operates within specified parameters and inspection/ control points are monitored • determine responses to out-of-specification results or non-conformance within level of responsibility • monitor operating efficiencies of the system, including recognition of signs and symptoms of faulty equipment and early warning signs of other potential problems • investigate, resolve and/or report problems and faults • plan scheduled events to minimise disruption to production • conduct/coordinate product or batch changeovers • conduct/coordinate shift handovers • review and maintain procedures to support system improvements • maintain work area to meet housekeeping standards • use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor • work cooperatively within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Identify Cultural, Religious and Dietary Requirements for Food Products**
Unit Code	**IND COP3 11 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to identify cultural, religious and dietary considerations when preparing food products or determining the suitability of food products to meet specific customer needs.

Elements	Performance Criteria
1. Identify cultural and religious requirements of customers	1.1. ***Cultural and religious practices*** and events that influence food production requirements are identified. 1.2. Food production methods and food products that cater for cultural and religious practices and events are identified. 1.3. The suitability of current food production methods and current food products against cultural and religious requirements are assessed. 1.4. If required, alternative processes and products are identified.
2. Identify dietary requirements of customers	2.1. A range of ***specific dietary*** requirements and their impact on food production are identified. 2.2. Food products that cater for dietary requirements are identified. 2.3. The suitability of current food production methods and current food products are assessed against dietary requirements. 2.4. If required alternative processes and products are identified.
3. Identify common food-related allergies	3.1. Common food-related allergies are identified. 3.2. Risk assessment is made of current products and processes against common food-related allergies. 3.3. Procedures are identified to avoid contamination with allergens.

Variable	Range
Cultural and religious practices	May include: • foods prepared to cultural and religious dietary laws (e.g. Kosher and Halals) • national and regional food products • foods that mark significant events (e.g. Christmas, Ramadan, Easter, Rosh Hashanah, Passover, Zul Hijjah and weddings) • feasting • fasting

	• alcohol-free beverages • pork-free foods • beef-free foods • vegetarian
Specific dietary	May include: • low GI • sugar free and/or fat free • dairy free • gluten free • flourless • rice flour • yeast free • low fat • low salt • vegetarian • vegan
Policies and procedures	May include: • Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative requirements	May include: • Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes: • the Food Standards, Code including labelling, weights and measures legislation • legislation covering food safety, environmental management, Occupational Health and Safety (OHS), anti-discrimination and equal opportunity
Workplace information	May include: • Workplace information can include: • verbal or written operating procedures • specifications • production schedules • recipe instructions

Evidence Guide	
Critical Aspects of Competency	Must demonstrate knowledge and skills ability to: • identify the food products commonly associated cultural, religious and dietary requirements • identify food processes commonly associated cultural religious and dietary requirements • identify common food allergens and contamination risks in the production process

Underpinning Knowledge	Demonstrate Knowledge of: • ingredients of available products • food production processes
Underpinning Skills	Demonstrate skills to: • use communication skills to interpret customer requests and suggest appropriate products that meet customer requirements • access information on cultural, religious and dietary needs • apply product knowledge to determine appropriate food products and processes to comply with cultural, religious or dietary considerations
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Identify Equipment Faults**
Unit Code	**IND COP3 12 0613**
Unit Descriptor	This unit requires the application of planning, technical knowledge and skills to check and isolate routine and non-routine equipment faults used in production and report on the status of equipment. It applies to all sectors of the industry. This competency is typically performed by operators demonstrating some relevant theoretical knowledge and using a range of well-developed skills requiring some discretion and judgment

Elements	Performance Criteria
1. Identify scope of operational check.	1.1 ***Tools and equipment*** components and operating systems are identified and classified. 1.2 Appropriate tests and ***procedures*** are matched to the equipment operating systems. 1.3 Special test procedures and parameters are identified in manufacturer's specifications and procedures. 1.4 The operating principles of hydraulic, pneumatic, mechanical and electrical/electronic systems are explained as related to workplace equipment. 1.5 Measures are implemented to control identified ***hazards*** in line with procedures and duty of care. 1.6 Checks on the physical condition of equipment are observed and undertaken as per procedures. 1.7 Preliminary observations are recorded. 1.8 Test procedures are discussed with appropriate personnel and necessary permission is obtained where required.
2. Plan operational checks.	2.1 Specifications and notes are checked from preliminary observations and areas to be clarified identified. 2.2 Testing sequence/s noting areas where results and observations should be recorded are planned. 2.3 Safe area for testing is identified. 2.4 Arrangements are made for any additional resources (including other employees).
3. Check unit through full operational range.	3.1 Testing, observing relevant safety and operational requirements are undertaken. 3.2 Results and findings are confirmed.

4. Identify fault and/or formulate recommendations.	4.1 Impact of ***fault or problem*** on work schedule is identified. 4.2 ***Records*** proposals are found for equipment repair based on faults cost/time implications and workplace approval systems. 4.3 Report is explained to relevant workplace personnel including any options and recommendations. 4.4 Repairs are undertaken where appropriate in accordance with procedures.

Variable	**Range**
Tools and equipment	May include • vibration meter, tachometer, current tester, thermal hand tools specific for the task • product testing equipment (flow meter, scales, tape measure, micrometer, caliper, ultrasonic thickness) • machinery measuring equipment imaging, temperature gauge) • Measuring and aligning equipment.
Procedures	May include procedures mean all relevant workplace procedures, work instructions, temporary instructions, standard operating procedures, plant description manuals, manufacturer's instructions, specifications, service manuals, machine circuit diagrams for hydraulic/pneumatic and electrical/electronic circuits and relevant industry and government codes and standards
Hazards	May include: • rotating and moving machinery • process materials, solids, fluids and gases under pressure or flowing • temporary connections or by-passes • electrical, hydraulic or pneumatic energy sources • Out-of-specification operation.
Fault or Problems	May include : • out-of-specification product or variations • response of equipment to materials variations • new or changed materials • changed equipment settings (e.g. higher speed or throughput) • equipment in need of maintenance • Procedures requiring update or modification.
Records	May include but not limited to: • plant data • log sheets • operational and performance reports • physical aspects such as noise, smell, feel and pressure condition monitoring information • planned maintenance schedules and procedures.

Evidence Guide	
Critical Aspects of Competency	Demonstrate skills and knowledge of ability to: • understand the procedures and know the importance of critical operational systems • Recognize potential situations requiring action and then implement appropriate action. • Consistent performance should be demonstrated. For example, look to see that: • early warning signs of equipment in need of attention/with potential problems are recognized • appropriate tests are undertaken and tests are analyzed appropriately • proposals for equipment repair are based upon the most appropriate and cost effective method to return equipment to full performance in a timely manner • items initiated are followed through until final resolution has occurred
Underpinning Knowledge	Demonstrate knowledge of: • principles of the operation of the equipment to be maintained • functions and troubleshooting of internal components and their problems • routine and non-routine causes of equipment failures and the service conditions which may increase maintenance • maintenance techniques, (e.g. reactive maintenance, predictive and preventative operational maintenance) • appropriate testing procedures and use of equipment for a range of equipment faults • operating principles for mechanical, hydraulic, pneumatic, electrical/electronic systems • urgency and timeliness factors in planning maintenance activities in relation to production requirements • Collection, analysis and reporting of data.
Underpinning Skills	Demonstrate skills to: • conduct inspections, checks and tests on equipment as appropriate • read and interpret circuit diagrams for mechanical, hydraulic, pneumatic and electrical/electronic operating systems • use technical information and manufacturer information to locate relevant data • interpret technical specifications and manufacturer instructions • ensure workplace is safe for testing and maintenance of equipment • identify hazards of the materials and process

	• implement appropriate procedures for hazard control • use PPE, safely handle products and materials, read relevant safety information • Apply safety precautions appropriate to the task.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level II	
Unit Title	**Monitor Storage Facilities**
Unit Code	**IND COP3 13 0613**
Unit Descriptor	This unit involves the skills and knowledge required to monitor storage facilities in accordance with workplace requirements including determining site functions and operations; monitoring storage operations in accordance with workplace procedures; and taking appropriate action in response to identified discrepancies, changes to storage requirements, or breaches in operational procedures.

Elements	Performance Criteria
1 Determine site functions and operations	1.1 Layout of storage facilities, work flow and activities undertaken in each zone are identified. 1.2 Type of storage facilities, their purpose and (any) associated risk factors are identified. 1.3 Inventory lists are accessed through record management system. 1.4 Storage separations and co-storage applications are identified.
2 Monitor storage operations	2.1 Inventory data is confirmed to match goods/freight and applicable storage requirements. 2.2 Storage areas are supervised to ensure movement of personnel and goods/freight is in accordance with workplace procedures. 2.3 Storage facilities are checked to ensure appropriate operational capacity. 2.4 Integrity of goods/materials is monitored to ensure appropriate quality is maintained. 2.5 Discrepancies/changes to storage requirements and/or inventory lists are noted and action undertaken in accordance with workplace procedures. 2.6 Appropriate action(s) are initiated in response to breaches of operational procedures or to an emergency/incident. 2.7 Operational actions and investigative outcomes are documented in accordance with workplace procedures.

Variable	Range
Customers	May include: • internal or external
Workplaces	• large, medium or small worksites

Requirements for work	May include: • restricted spaces • site restrictions and procedures • use of safety and personal protective equipment • communications equipment • specialized lifting and/or handling equipment • incident/accident breakdown procedures • additional gear and equipment • noise restrictions • hours of operations • authorities and permits
Work	May include: • restricted spaces • exposed conditions • controlled or open environments • environments involving the movement of equipment, goods, materials and/or vehicular traffic
Goods	May include: • special handling, location, storage and/or packaging requirements, including temperature controlled goods and dangerous goods
Modes of transfer	May include: • manual or motorized
Storage types	May include: • bin/binning systems • rack refrigeration/freezers/cold rooms • marked floor space • containers • racks and racking systems • block/stacks • pallets
Inventory systems	May include: • automated • manual • paper-based • computerized and microfiche
Categories or groups of products/stock	May include: • small parts • perishable goods • overseas export • dangerous goods • refrigerated products • temperature controlled stock • fragile goods

Characteristics of products/stock	May include: • small parts • toxicity • flammability • form • weight • size • state • perish ability • fragility • security risk
Labeling systems	May include: • batch code • bar code • identification numbering systems • serial numbers • symbols for safe handling • Ethiopian Dangerous Goods and HAZCHEM Codes
Hazards in the work area	May include: • hazardous or dangerous materials • contamination of, or from, materials being handled • noise, light, energy sources • stationary and moving machinery, parts or components • service lines • skills, leakages, ruptures • dust/vapors • oil or water on floor • a fire or explosion • damaged packaging or pallets • debris on floor • faulty racking • poorly stacked pallets • faulty equipment
Communication in the work area	May include: • phone • electronic data interchange (EDI) • fax • email • internet • RF systems • oral, aural or signed communications

Local terminology used, workplace procedures	May include: • company procedures • enterprise procedures • organizational procedures • established procedures
Personal protective equipment	May include: • gloves • safety headwear and footwear • safety glasses • two-way radios • high visibility clothing
Consultative processes	May include: • other employees and supervisors • suppliers, customers and clients • relevant authorities and institutions • management and union representatives • industrial relations and OHS specialists • other maintenance, professional or technical staff
Information/documents	May include: • goods identification numbers and codes • manifests, picking slips, merchandise transfers, stock requisitions and bar codes • codes of practice and regulations relevant to workplace operations • Ethiopian and international regulations and codes of practice for the handling, stacking and transport of dangerous goods and hazardous substances • operations manuals, job specifications and induction documentation • manufacturers specifications for equipment • workplace procedures and policies • supplier and/or client instructions • dangerous goods declarations and material safety data sheets (where applicable) • award, enterprise bargaining agreement, other industrial arrangements • relevant Ethiopian standards and certification requirements • quality assurance and emergency procedures
Applicable regulations and legislation	May include: • codes and regulations relevant to the monitoring of storage facilities • Ethiopian and international regulations and codes of practice for the storage of dangerous goods and hazardous substances, including:

	➢ Ethiopian Dangerous Goods Code ➢ Ethiopian Explosives Code ➢ license, patent or copyright arrangements • water and road use and license arrangements • export/import/quarantine/bond requirements • marine orders • relevant OHS and environmental protection legislation • workplace relations regulations • workers compensation regulations

Evidence Guide	
Critical Aspects of Competency	Demonstrate skills and knowledge of: • The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying: • the underpinning knowledge and skills • relevant legislation and workplace procedures • other relevant aspects of the range statement
Underpinning Knowledge	Demonstrate knowledge of: • Ethiopian codes and regulations, permit and license requirements relevant to the workplace activities • Relevant OHS and environmental protection procedures and guidelines • Workplace procedures and policies relevant to the monitoring of storage facilities • Focus of operation of work systems, equipment, management and site operating systems • Information on various categories or groups of products including their key characteristics and hazards and the special handling, stacking and storage requirements for each • Types of storage areas and related equipment appropriate for different types of goods including perishable, fragile, dangerous, composition/state goods • Equipment applications, capacities, configurations, safety hazards and control mechanisms • Requirements for workplace documentation reports and records • Problems that may occur when monitoring storage facilities and appropriate action that can be taken • Site layout • Housekeeping standards and procedures required in the workplace
Underpinning Skills	Demonstrate skills to: • Communicate effectively with others when monitoring storage facilities

	• Read and interpret instructions, procedures, information and signs relevant to the monitoring of storage facilities • Complete documentation related to the monitoring of storage facilities • Work collaboratively with others when monitoring storage facilities • Adapt appropriately to cultural differences in the workplace, including modes of behavior and interactions with others • Promptly report and/or rectify any identified problems, faults or malfunctions when monitoring storage facilities in accordance with regulatory requirements and workplace procedures • Implement contingency plans for unplanned events related to the monitoring of storage facilities • Apply precautions and required action to minimize, control or eliminate hazards that may exist during work activities • Modify activities depending on differing operational contingencies, risk situations and environments • Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment • Operate and adapt to differences in equipment in accordance with standard operating procedures • Use information on products and stock to determine, plan and organize processes used for the monitoring of storage facilities • Select and use relevant communications, computing and office equipment when monitoring storage facilities • Monitor performance of equipment • Select and use required personal protective equipment conforming to industry and OHS standards
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Monitor Implementation of Work Plan/Activities**
Unit Code	**IND COP3 14 0613**
Unit Descriptor	This unit covers competence required to oversee and monitor the quality of work operations within an enterprise. This unit may be carried out by team leaders or supervisors.

Elements	Performance Criteria
1. Monitor and improve workplace operations	1.1 Efficiency and service levels are monitored on an ongoing basis. 1.2 Operations in the workplace support overall enterprise goals and quality assurance initiatives. 1.3 Quality ***problems*** and issues are promptly identified and adjustments are made accordingly. 1.4 Procedures and systems are changed in consultation with colleagues to improve efficiency and effectiveness. 1.5 Colleagues are consulted about ways to improve efficiency and service levels.
2. Plan and organise workflow	2.1 Current workload of colleagues is accurately assessed. 2.2 Work is scheduled in a manner which enhances efficiency and customer service quality. 2.3 Work is delegated to appropriate people in accordance with principles of delegation. 2.4 Workflow is assessed against agreed objectives and timelines and colleagues are assisted in prioritisation of workload. 2.5 Input is provided to appropriate management regarding staffing needs.
3. Maintain workplace records	3.1 ***Workplace records*** are accurately completed and submitted within required timeframes. 3.2 Where appropriate completion of records is delegated and monitored prior to submission.

Variable	Range
Problems	May include: • difficult customer service situations • equipment breakdown/technical failure • delays and time difficulties • competence
Workplace records	May include: • staff records and regular performance reports

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: • ability to effectively monitor and respond to a range of common operational and service issues in the workplace • understanding of the role of staff involved in workplace monitoring • knowledge of quality assurance, principles of workflow planning, delegation and problem solving
Underpinning Knowledge	Demonstrate knowledge of: • roles and responsibilities in monitoring work operations • overview of leadership and management responsibilities • principles of work planning and principles of delegation • typical work organization methods appropriate to the sector • quality assurance principles and time management • problem solving and decision making processes • industrial and/or legislative issues which affect short term work organization as appropriate to industry sector
Underpinning Skills	Demonstrate skills to: • monitor and improve workplace operations • plan and organize workflow • maintain workplace records
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Apply Quality Control**
Unit Code	**IND COP3 15 0613**
Unit Descriptor	This unit covers the knowledge, attitudes and skills required in applying quality control in the workplace.

Elements	Performance Criteria
1. Implement quality standards	1.1 Agreed quality standard and procedures are acquired and confirmed. 1.2 Standard procedures are introduced to organizational staff/personnel. 1.3 Quality standard and procedures documents are provided to employees in accordance with the organization policy. 1.4 Standard procedures are revised / updated when necessary.
2. Assess quality of service delivered	2.1 Services delivered are ***quality checked*** against organization ***quality standards*** and specifications. 2.2 Service delivered are evaluated using the appropriate evaluation ***quality parameters*** and in accordance with organization standards. 2.3 Causes of any identified faults are identified and corrective actions are taken in accordance with organization policies and procedures.
3. Record information	3.1 Basic information on the quality performance is recorded in accordance with organization procedures. 3.2 Records of work quality are maintained according to the requirements of the organization.
4. Study causes of quality deviations	4.1 Causes of deviations from final outputs or services are investigated and reported in accordance with organization procedures. 4.2 Suitable preventive action is recommended based on organization quality standards and identified causes of deviation from specified quality standards of final service or output.
5. Complete documentation	5.1 Information on quality and other indicators of service performance is recorded. 5.2 All service processes and outcomes are recorded.

Variable	Range
Quality check	May include: • Check against design / specifications • Visual inspection and Physical inspection

Quality standards	May include: • Materials • Components • Process • Procedures
Quality parameters	May include: • Standard Design / Specifications • Material Specification

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Check completed work continuously against organization standard • Identify and isolate faulty or poor service • Check service delivered against organization standards • Identify and apply corrective actions on the causes of identified faults or error • Record basic information regarding quality performance • Investigate causes of deviations of services against standard • Recommend suitable preventive actions
Underpinning Knowledge	Demonstrates knowledge of: • Relevant quality standards, policies and procedures • Characteristics of services • Safety environment aspects of service processes • Evaluation techniques and quality checking procedures • Workplace procedures and reporting procedures
Underpinning Skills	Demonstrates skills to: • interpret work instructions, specifications and standards appropriate to the required work or service • carry out relevant performance evaluation • maintain accurate work records • meet work specifications and requirements • communicate effectively within defined workplace procedures
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Lead Workplace Communication**
Unit Code	**IND COP3 16 0613**
Unit Descriptor	This unit covers the knowledge, attitudes and skills needed to lead in the dissemination and discussion of information and issues in the workplace.

Elements	Performance Criteria
1. Communicate information about workplace processes	1.1 Appropriate ***communication method*** is selected. 1.2 Multiple operations involving several topics areas are communicated accordingly. 1.3 Questions are used to gain extra information. 1.4 Correct sources of information are identified. 1.5 Information is selected and organized correctly. 1.6 Verbal and written reporting is undertaken when required. 1.7 Communication skills are maintained in all situations.
2. Lead workplace discussion	2.1 Response to workplace issues is sought. 2.2 Response to workplace issues are provided immediately. 2.3 Constructive contributions are made to workplace discussions on such issues as production, quality and safety. 2.4 Goals/objectives and action plan undertaken in the workplace are communicated.
3. Identify and communicate issues arising in the workplace	3.1 Issues and problems are identified as they arise. 3.2 Information regarding problems and issues are organized coherently to ensure clear and effective communication. 3.3 Dialogue is initiated with appropriate staff/personnel. 3.4 Communication problems and issues are raised as they arise.

Variable	Range
Methods of communication	May include but not limited to: • Non-verbal gestures • Verbal • Face to face • Two-way radio • Speaking to groups • Using telephone • Written • Using Internet and Cell phone

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Deal with a range of communication/information at one time • Make constructive contributions in workplace issues • Seek workplace issues effectively • Respond to workplace issues promptly • Present information clearly and effectively written form • Use appropriate sources of information • Ask appropriate questions • Provide accurate information
Underpinning Knowledge	Demonstrates knowledge of: • Organization requirements for written and electronic communication methods • Effective verbal communication methods
Underpinning Skills	Demonstrates skills to: • Organize information • Understand and convey intended meaning • Participate in variety of workplace discussions • Comply with organization requirements for the use of written and electronic communication methods
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Lead Small Teams**
Unit Code	**IND COP3 17 0613**
Unit Descriptor	This unit covers the skills, knowledge and attitudes required to determine individual and team development needs and facilitate the development of the work group.

Elements	Performance Criteria
1. Provide team leadership	1.1 ***Learning and development needs*** are systematically identified and implemented in line with ***organizational requirements****.* 1.2 Learning plan to meet individual and group training and developmental needs is collaboratively developed and implemented. 1.3 Individuals are encouraged to self-evaluate performance and identify areas for improvement. 1.4 ***Feedback on performance*** of team members is collected from relevant sources and compared with established team learning process.
2. Foster individual and organizational growth	2.1 Learning and development program goals and objectives are identified to match the specific knowledge and skills requirements of competence standards. 2.2 ***Learning delivery methods*** are appropriate to the learning goals, the learning style of participants and availability of equipment and resources. 2.3 Workplace learning opportunities and coaching/ mentoring assistance are provided to facilitate individual and team achievement of competencies. 2.4 Resources and timelines required for learning activities are identified and approved in accordance with organizational requirements.
3. Monitor and evaluate workplace learning	3.1 Feedback from individuals or teams is used to identify and implement improvements in future learning arrangements. 3.2 Outcomes and performance of individuals/teams are assessed and recorded to determine the effectiveness of development programs and the extent of additional support. 3.3 Modifications to learning plans are negotiated to improve the efficiency and effectiveness of learning. 3.4 Records and reports of competence are maintained within organizational requirement.

4. Develop team commitment and cooperation	4.1 Open communication processes to obtain and share information is used by team. 4.2 Decisions are reached by the team in accordance with its agreed roles and responsibilities. 4.3 Mutual concern and camaraderie are developed in the team.
5. Facilitate accomplishment of organizational goals	5.1 Team members actively participated in team activities and communication processes. 5.2 Teams' members developed individual and joint responsibility for their actions. 5.3 Collaborative efforts are sustained to attain organizational goals.

Variable	**Range**
Learning and development needs	May include: • Coaching, mentoring and/or supervision • Formal/informal learning program • Internal/external training provision • Work experience/exchange/opportunities • Personal study • Career planning/development • Performance appraisals • Workplace skills assessment • Recognition of prior learning
Organizational requirements	May include: • Quality assurance and/or procedures manuals • Goals, objectives, plans, systems and processes • Legal and organizational policy/guidelines and requirements • Safety policies, procedures and programs • Confidentiality and security requirements • Business and performance plans • Ethical standards • Quality and continuous improvement processes and standards
Feedback on performance	May include: • Formal/informal performance appraisals • Obtaining feedback from supervisors and colleagues • Obtaining feedback from clients • Personal and reflective behavior strategies • Routine and organizational methods for monitoring service delivery

Learning delivery methods	May include: • On the job coaching or mentoring • Problem solving • Presentation/demonstration • Formal course participation • Work experience and Involvement in professional networks • Conference/seminar attendance and induction
Learning and development needs	May include: • Coaching, mentoring and/or supervision • Formal/informal learning program • Internal/external training provision • Work experience/exchange/opportunities • Personal study • Career planning/development • Performance appraisals • Workplace skills assessment • Recognition of prior learning

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • identify and implement learning opportunities for others • give and receive feedback constructively • facilitate participation of individuals in the work of the team • negotiate learning plans to improve the effectiveness of learning • prepare learning plans to match skill needs • access and designate learning opportunities
Underpinning Knowledge	Demonstrates knowledge of: • coaching and mentoring principles • how to work effectively with team members who have diverse work styles, aspirations, cultures and perspective • how to facilitate team development and improvement • methods and techniques for eliciting and interpreting feedback • methods for identifying and prioritizing personal development opportunities and options • career paths and competence standards in the industry
Underpinning Skills	Demonstrates skills to: • read and understand a variety of texts, prepare general information and documents according to target audience; spell with accuracy; use grammar and punctuation effective relationships and conflict management • receive feedback and report, maintain effective relationships and conflict management • organize required resources and equipment to meet learning needs

	• provide support to colleagues • organize information; assess information for relevance and accuracy; identify and elaborate on learning outcomes • facilitation skills to conduct small group training sessions • relate to people from a range of social, cultural, physical and mental backgrounds
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Improve Business Practice**
Unit Code	**IND COP3 18 0613**
Unit Descriptor	This unit covers the skills, knowledge and attitudes required in promoting, improving and growing business operations.

Elements	Performance Criteria
1. Diagnose the business	1.1 ***Data required*** for diagnosis is determined and acquired. 1.2 ***Competitive advantage*** of the business is determined from the data. 1.3 ***SWOT analysis*** of the data is undertaken.
2. Benchmark the business	2.1 Sources of relevant benchmarking data are identified. 2.2 ***Key indicators*** for benchmarking are selected in consultation with key stakeholders. 2.3 Like indicators of own practice are compared with benchmark indicators. 2.4 Areas for improvement are identified.
3. Develop plans to improve business performance	3.1 A consolidated list of required improvements is developed. 3.2 Cost-benefit ratios for required improvements are determined. 3.3 Work flow changes resulting from proposed improvements are determined. 3.4 Proposed improvements are ranked according to agreed criteria. 3.5 An action plan is developed and agreed to implement the top ranked improvements. 3.6 ***Organizational structures*** are checked to ensure they are suitable.
4. Develop marketing and promotional plans	4.1 The practice vision statement is reviewed. 4.2 Practice ***objectives*** are developed/ reviewed. 4.3 Target markets are identified/ refined. 4.4 ***Market research data*** is obtained. 4.5 ***Competitor analysis*** is obtained. 4.6 ***Market position*** is developed/ reviewed. 4.7 ***Practice brand*** is developed. 4.8 ***Benefits*** of practice/practice products/services are identified. 4.9 ***Promotion tools*** are selected/ developed.

5. Develop business growth plans	5.1 Plans are developed to increase ***yield per existing client***. 5.2 Plans are developed to add new clients. 5.3 Proposed plans are ranked according to agreed criteria. 5.4 An action plan is developed and agreed to implement the top ranked plans. 5.5 Practice work practices are reviewed to ensure they support growth plans.
6. Implement and monitor plans	6.1 Implementation plan is developed in consultation with all relevant stakeholders. 6.2 Indicators of success of the plan are agreed. 6.3 Implementation is monitored against agreed indicators. 6.4 Implementation is adjusted as required.

Variable	**Range**
Data required includes:	May include: • organization capability • appropriate business structure • level of client service which can be provided • internal policies, procedures and practices • staff levels, capabilities and structure • market, market definition • market changes/market segmentation • market consolidation/fragmentation • revenue • level of commercial activity • expected revenue levels, short and long term • revenue growth rate • break even data • pricing policy • revenue assumptions • business environment • economic conditions • social factors • demographic factors • technological impacts • political/legislative/regulative impacts • competitors, competitor pricing and response to pricing • competitor marketing/branding • competitor products

Competitive advantage	May include: • services/products • fees • location • timeframe
SWOT analysis	May include: • internal strengths such as staff capability, recognized • quality • internal weaknesses such as poor morale, • under-capitalization, poor technology • external opportunities such as changing market and • economic conditions • external threats such as industry fee structures, strategic • alliances, competitor marketing
Key indicators	May include: • salary cost and staffing • personnel productivity (particularly of principals) • profitability • fee structure • client base • size staff/principal • overhead/overhead control
Organizational structures	May include: • Legal structure (partnership, Limited Liability Company, etc.) • organizational structure/hierarchy • reward schemes
Objectives should be 'SMART'	May include: • S: Specific • M: Measurable • A: Achievable • R: Realistic • T: Time defined
Market research data	May include: • data about existing clients • data about possible new clients • data from internal sources • data from external sources such as: ➢ trade associations/journals ➢ Yellow Pages small business surveys ➢ libraries ➢ Internet ➢ Chamber of Commerce ➢ client surveys ➢ industry reports and secondary market research

	• primary market research such as:
	  ➢ telephone surveys
	  ➢ personal interviews
	  ➢ mail surveys

Competitor analysis	May include: • competitor offerings • competitor promotion strategies and activities • competitor profile in the market place
Market position should include data on:	May include: • product • the good or service provided • product mix • the core product - what is bought • the tangible product - what is perceived • the augmented product - total package of consumer • features/benefits • product differentiation from competitive products • new/changed products • Price and pricing strategies (cost plus, supply/demand, ability to pay, etc.) • Pricing objectives (profit, market penetration, etc.) • cost components • market position • distribution strategies • marketing channels • promotion • promotional strategies • target audience • communication • promotion budget
Practice brand	May include: • practice image • practice logo/letter head/signage • phone answering protocol • facility decor • slogans • templates for communication/invoicing • style guide • writing style • AIDA (Attention, Interest, Desire and Action)
Benefits	May include: • features as perceived by the client • benefits as perceived by the client

Promotion tools	May include: • networking and referrals • seminars • advertising • press releases • publicity and sponsorship • brochures • newsletters (print and/or electronic) • websites • direct mail • telemarketing/cold calling
Yield per existing client	May include: • raising charge out rates/fees • packaging fees • reduce discounts • sell more services to existing clients

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: • ability to identify the key indicators of business performance • ability to identify the key market data for the business • knowledge of a wide range of available information sources • ability to acquire information not readily available within a business • ability to analyze data and determine areas of improvement • ability to negotiate required improvements to ensure implementation • ability to evaluate systems against practice requirements and form recommendations and/or make recommendations • ability to assess the accuracy and relevance of information
Underpinning Knowledge	Demonstrates knowledge of: • data analysis • communication skills • computer skills to manipulate data and present information • negotiation skills • problem solving • planning skills • marketing principles • ability to acquire and interpret relevant data • current product and marketing mix • use of market intelligence • development and implementation strategies of promotion and growth plans

Underpinning Skills	Demonstrates skill in: • data analysis and manipulation • ability to acquire and interpret required data, current practice systems and structures and sources of relevant benchmarking data • applying methods of selecting relevant key benchmarking indicators • communication skills • working and consulting with others when developing plans for the business • planning skills, negotiation skills and problem solving • using computers to manipulate, present and distribute information
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level III	
Unit Title	**Prevent and Eliminate MUDA**
Unit Code	**IND COP3 19 0613**
Unit Descriptor	This unit of competence covers the knowledge, skills and attitude required by a worker to prevent and eliminate MUDA/wastes in his/her their workplace. It covers responsibility for the day-to-day operation of the work and ensures Kaizen elements are continuously improved and institutionalized.

Elements	Performance Criteria
1. Prepare for work.	1.1 Work instructions are used to determine job requirements, including method, material and equipment. 1.2 Job specifications are read and interpreted following working manual. 1.3 ***OHS requirements***, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work. 1.4 Appropriate material is selected for work. 1.5 ***Safety equipment and tools*** are identified and checked for safe and effective operation.
2. Identify MUDA.	2.1 Plan of MUDA identification is prepared and implemented. 2.2 Causes and effects of MUDA are discussed. 2.3 ***Tools and techniques*** are used to draw and analyze current situation of the work place. 2.4 Wastes/MUDA are identified and measured based on ***relevant procedures***. 2.5 Identified and measured wastes are reported to relevant personnel.
3. Eliminate wastes/MUDA.	3. 1. Plan of MUDA elimination is prepared and implemented. 3. 2. Necessary attitude and ***the ten basic principles for improvement*** are adopted to eliminate waste/MUDA. 3. 3. Tools and techniques are used to eliminate wastes/MUDA based on the procedures and OHS. 3. 4. Wastes/MUDA are reduced and eliminated in accordance with OHS and organizational requirements. 3. 5. Improvements gained by elimination of waste/MUDA are reported to relevant bodies.

4. Prevent occurrence of wastes/MUDA.	4.1 Plan of MUDA prevention is prepared and implemented. 4.2 Standards required for machines, operations, defining normal and abnormal conditions, clerical procedures and procurement are discussed and prepared. 4.3 Occurrences of wastes/MUDA are prevented by using ***visual and auditory control methods***. 4.4 Waste-free workplace is created using ***5W and 1H***sheet. 4.5 The completion of required operation is done in accordance with standard procedures and practices. 4.6 The updating of standard procedures and practices is facilitated. 4.7 The capability of the work team that aligns with the requirements of the procedure is ensured.

Variable	**Range**
OHS requirements	May include but not limited to: • Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances. • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices. • Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. • Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
Safety equipment and tools	May include but not limited to: • dust masks / goggles • glove • working cloth • first aid • safety shoes
Tools and techniques	May include but not limited to: • Plant Layout • Process flow • Other Analysis tools

	• Do time study by work element • Measure Travel distance • Take a photo of workplace • Measure Total steps • Make list of items/products, who produces them and who uses them & those in warehouses, storages etc. • Focal points to Check and find out existing problems • 5S • Layout improvement • Brainstorming • Andon • U-line • In-lining • Unification • Multi-process handling & Multi-skilled operators • A.B. control (Two point control) • Cell production line • TPM (Total Productive Maintenance)
Relevant procedures	May include but not limited to: • Make waste visible • Be conscious of the waste • Be accountable for the waste. • Measure the waste.
The ten basic principles for improvement	May include but not limited to: • Throw out all of your fixed ideas about how to do things. • Think of how the new method will work- not how it won. • Don't accept excuses. Totally deny the status quo. • Don't seek perfection. A 5o percent implementation rate is fine as long as it's done on the spot. • Correct mistakes the moment they are found. • Don't spend a lot of money on improvements. • Problems give you a chance to use your brain. • Ask "why?" at least five times until you find the ultimate cause. • Ten people's ideas are better than one person's. • Improvement knows no limits.
Visual and auditory control methods	May include but not limited to: • Red Tagging • Sign boards • Outlining • Andons • Kanban, etc.

5W and 1H	May include but not limited to: • Who • What • Where • When • Why • How

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge to: • discuss why wastes occur in the workplace • discuss causes and effects of wastes/MUDA in the workplace • analyze the current situation of the workplace by using appropriate tools and techniques • identify, measure, eliminate and prevent occurrence of wastes by using appropriate tools and techniques • use 5W and 1H sheet to prevent
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: • Targets of customers and manufacturer/service provider • Traditional and kaizen thinking of price setting • Kaizen thinking in relation to targets of manufacturer/service provider and customer • value • The three categories of operations • the 3“MU” • waste/MUDA • wastes occur in the workplace • The 7 types of MUDA • The Benefits of identifying and eliminating waste • Causes and effects of 7 MUDA • Procedures to identify MUDA • Necessary attitude and the ten basic principles for improvement • Procedures to eliminate MUDA • Prevention of wastes • Methods of waste prevention • Definition and purpose of standardization • Standards required for machines, operations, defining normal and abnormal conditions, clerical procedures and procurement • Methods of visual and auditory control • TPM concept and its pillars. • Relevant Occupational Health and Safety (OHS) and environment requirements

	• Plan and report • Method of communication
Underpinning Skills	Demonstrates skills to: • draw & analyze current situation of the work place • use measurement apparatus (stop watch, tape, etc.) • calculate volume and area • use and follow checklists to identify, measure and eliminate wastes/MUDA • identify and measure wastes/MUDA in accordance with OHS and procedures • use tools and techniques to eliminate wastes/MUDA in accordance with OHS procedure • apply 5W and 1H sheet • update and use standard procedures for completion of required operation • work with others • read and interpret documents • observe situations • solve problems • communicate • gather evidence by using different means • report activities and results using report formats
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

NTQF level IV

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Implement and Review the Processing of Chocolate**
Unit Code	**IND COP4 01 0613**
Unit Descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for manufacture of chocolate, including product testing and sensory analysis

Elements	Performance Criteria
1 Prepare for the manufacturing of chocolate.	1.1 The required formulation of ***chocolate*** is selected. 1.2 The appropriate production system and the preferred sequence of activity to prepare the system for operation are selected. 1.3 Equipment is prepared and safe operating procedures accessed for its operation
2 Carry out preparation and manufacture of chocolate	2.1 A production schedule is implemented to ensure all resources and ***OHS requirements*** are available and meet company requirements. 2.2 Production system is set to operating specifications before and during production. 2.3 Data requirements appropriate for food safety, quality and production standards are documented 2.4 Data collection points consistent with equipment capabilities and data requirements are identified 2.5 Procedures to deal with non-conformance in relation to process and the final product are developed. 2.6 Process control system is implemented and monitored
3 Diagnose, rectify and/or report problem arising from the preparation and manufacture of chocolate	3.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of chocolate 3.2 Identified adjustments are carried out to inputs, process & equipment as required. 3.3 A system to identify defects in the preparation and manufacture of chocolate is implemented. 3.4 Adjustments to process and equipment, as identified, are made. 3.5 Problems are reported to designated person according to company ***policies and procedures***.

Variable	Range
Chocolate	May include: • This includes all chocolates and compound chocolates in liquid and solid form for further processing or industrial sales.
OHS requirements	May include: • legislation, regulations, Codes of practice • Safety Data Sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Policies and procedures	May include: • Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
Legislation	May include: • Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labeling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Prepare for the manufacturing of chocolate. • Carry out preparation and manufacture of chocolate • diagnose, rectify and/or report problem arising from the preparation and manufacture of chocolate • review production processes
Underpinning Knowledge	Demonstrates knowledge of: • carry out production processes for the manufacture of chocolate including mixing, refining, couching and storage • plan the production processes related to chocolate manufacture • monitor the output of each of the processes used in the preparation and manufacture of chocolate • monitor process controls for preparation and manufacture of chocolate • recognise the organoleptic properties of different types of chocolate • compare chocolate to market specifications for high and low boil confectionery • operate equipment and accessories for the preparation and manufacture of chocolate
Underpinning Skills	Demonstrates skills to: • carry out production processes for the manufacture of chocolate including mixing, refining, conching and storage

	• plan the production processes related to chocolate manufacture • monitor the output of each of the processes used in the preparation and manufacture of chocolate • monitor process controls for preparation and manufacture of chocolate • recognise the organoleptic properties of different types of chocolate • compare chocolate to market specifications for high and low boil confectionery • operate equipment and accessories for the preparation and manufacture of chocolate
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Apply Principles of Food Packaging**
Unit Code	**IND COP4 02 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to oversee packaging operations and assess the nature and likely causes of packaging problems.

Elements	Performance Criteria
1. Identify characteristics of packaging suitable for use with food products	1.1. Packaging materials suitable for food application are identified. 1.2. Packaging interactions with food products are identified. 1.3. Environmental impact and handling features of packaging materials are identified. 1.4. Customer and legal requirements of packaging are identified. 1.5. Packaging material characteristics meet the needs of the food to be packaged.
2. Apply packaging knowledge in a production environment	2.1. Properties of packaging materials used in a ***packaging process*** are identified. 2.2. Costs of packaging materials are identified. 2.3. Procedures for safe operation of the packaging process are established and/or reviewed. 2.4. ***Out-of-specification*** packaging outcomes are analyzed to identify probable cause. 2.5. Opportunities are identified and investigated for improvement to materials, processes or environmental impacts within level of technical responsibility. 2.6. Proposals are developed and implemented for improvement within level of authority and according to company ***policies and procedures***.

Variable	Range
Packaging processes	May include: • Packaging processes and technologies include: • active packaging materials May include: • vacuum packing • gas flushing or sparing and MAP
Out-of-specification	May include: • Follow-up action in response to out-of-specification results occurs in consultation with the relevant quality/technical expert responsible for packaging specifications

Policies and procedures	Product packaging and related work processes are consistent with company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements and takes account of OHS and environmental impact

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • analyse packaging system components, including materials used and interaction with product, costs, processes, legal and customer requirements and environmental and handling implications • analyse and confirm safety aspects of processes and equipment • analyse non-conformances and packaging problems and determine probable cause • Propose improvements to the packaging system.
Underpinning Knowledge	Demonstrate the Knowledge of: • properties of packaging materials designed to protect product and extend shelf-life • packaging interactions with food products • costs of packaging materials • legal requirements relating to packaged product, including Food Standards Code requirements and other legislation relevant to the product • features of packaging design that preserve the product • pathogens and spoilage that can occur in packaged food and the conditions required for these to occur • impact of extrinsic factors on food products, such as processing method, temperature, water loss/humidity, maturity (applies to maturity of fruit and vegetables when harvested), handling, cleaning, sanitation and personal hygiene practices and gaseous composition of the storage atmosphere • characteristics of product and its behaviour when packaged over the shelf-life of the product • factors that influence selection of packaging materials • typical problems that occur in the packaging process, and likely causes and appropriate response options • the characteristics of product handled and its behaviour when packaged over the shelf-life of the product, for example, reactions that occur when canning some types of vegetables requiring appropriately coated cans, respiration that is ongoing after fresh fruit and vegetables are packaged requiring gas permeable packaging materials, and the effect of high moisture and high fat content products on the packaging process where MAP packaging processes are used

Underpinning Skills	Demonstrate the skill of: • identify properties of packaging materials as specified in packaging specifications for product handled • identify the quality assurance systems in place to ensure that the packaged product meets customer and legal requirements • identify factors that affect shelf-life of the packaged product and the features of packaging design that preserve the product • identify problems that occur in the packaging process and investigate likely causes • determine appropriate corrective action to prevent packaging non-conformance • identify packaging materials suitable for use with food products, including plastics, paper-based materials, glass and metal-based materials • describe the purpose of packaging and the properties of packaging materials designed to protect product and extend shelf-life, including the role of packaging to provide: • protection of product from contamination (microbial, pest infestation, and physical damage) • barriers (atmospheric, moisture, flavour and light) • package saleability and seal integrity • easy-to-open access to the product • information to the consumer about the product • market appeal • identify legal requirements relating to packaged product, including Food Standards Code requirements and other legislation relevant to the product • identify pathogens and spoilage that can occur in packaged food and the conditions required for these to occur • identify features intrinsic to the food type, according to food type, such as pH, water activity, nutrient content, presence of microbiological compounds, respiration rate (fresh fruit and vegetables) and biological structure • identify extrinsic factors, such as processing method, temperature, water loss/humidity, maturity (applies to maturity of fruit and vegetables when harvested), handling, cleaning, sanitation and personal hygiene practices and gaseous composition of the storage atmosphere • identify food spoilage indicators, including microbial contamination, enzyme browning and sensory degradation of characteristics, such as flavour, aroma, colour and texture • describe the features of packaging material requirements of products handled in the workplace, including coated packaging products, and active/interactive packaging films

	• identify factors that influence selection of packaging materials, including market appeal, suitability for use with the food product/s to be packaged, compatibility with packaging technology, cost, environmental features, consumer safety/tamper evidence • identify packaging methods and technologies designed to extend shelf-life, including active packaging materials, vacuum packing, gas flushing or sparing and Modified Atmosphere Packaging (MAP) • describe the significance of factors, such as moisture and temperature in promoting/preventing product spoilage • identify typical problems that occur in the packaging process, and outline likely causes and appropriate response options within level of responsibility (where MAP is used, this includes pack collapse and may include fogging - relevant to fresh fruit and vegetables) • identify relevant sources of technical expertise and related authority levels to address packaging issues • for MAP packaging processes, describe the effect of gas composition on the packaged product according to enterprise procedures, including the role of the most commonly used gases in food packaging including carbon dioxide, oxygen and nitrogen and the reaction between gases, the packaged product and the packaging material • use communication skills to interpret and complete work information to support operations of work team or area • demonstrate and support cooperative work practices within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Implement and Review the Processing of High and Low Boil Con**
Unit Code	**IND COP4 03 0613**
Unit Descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for manufacture of high and low boil confectionery.

Elements	Performance Criteria
1 Carry out the preparation and manufacture of high and low boil confectionery to meet quality standards.	1.1 Equipment and accessories used in the preparation and manufacture of ***high and low boil confectionery*** are prepared 1.2 ***Major and minor Ingredients*** are assembled and prepared and product formulations checked 1.3 Standard Operating Procedures are put in place 1.4 A production schedule is implemented to ensure all resources and ***OHS requirements*** are available and meet company standards. 1.5 Production system is set to operating specifications before and during production. 1.6 Data requirements appropriate for food safety, quality and production standards are interpreted 1.7 Data collection points consistent with equipment capabilities and data requirements are determined 1.8 Procedures to deal with non-conformance in relation to process and the final product are developed. 1.9 Process control system is implemented and monitored.
2 Diagnose, rectify and/or report problem arising from the preparation and manufacture of high and low boil confectionery.	2.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of confectionery 2.2 Identified adjustments to inputs, process & equipment are implemented. 2.3 Adjustments are implemented to process/equipment as identified. 2.4 Problems are reported to designated person according to company ***policies and procedures.***
3 Review production processes	3.1 The Critical Control Points (CCPs) and critical limits for product safety are reviewed 3.2 A sampling plan is developed and implemented

	3.3 Sensory analysis is conducted and analysed 3.4 Food tests are undertaken to check product composition and compliance with label information 3.5 Operating procedures and the process control system are reviewed for food safety and quality 3.6 Safe work systems are reviewed for processing of high and low boil confectionery 3.7 Environmental impacts and energy efficiencies are reviewed for processing of high and low boil confectioner

Variable	**Range**
High and low boil confectionery	May include: • Includes sugar and "sugar free" boiled sweets, drops, brittles, toffees, jellies, caramels, fudges, nougats, pastes, creams and fondants. Can be consumed as is or included as a centre for, say, chocolate enrobing, molding or panning.
Major and Minor ingredients	May include: • sugar, glucose syrups, "sugar free" analogues of these, fats, and milk products • coloring and flavoring agents, buffers, intense sweeteners
OHS requirements	May include: • legislation, regulations, Codes of practice • Safety Data Sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Policies and procedures	May include: • Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
Legislation	May include: • Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labeling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: • Critical aspects of assessment must include evidence of the ability to produce high and low boil confectionery including: ➢ implementing process control procedures and data collection,

	➢ diagnosing and reporting problems for manufacturing, ➢ carrying out sensory evaluation and product testing, and ➢ Reviewing the production system for food safety and quality and environmental impact.
Underpinning Knowledge	Demonstrates knowledge of: • Different types of high and low boil confectionery. • formulation of high and low boil confectionery • purpose of each process used in the preparation and manufacture of high and low boil confectionery • relationships between the processes used in the preparation and manufacture of high and low boil confectionery • outputs of each of the processes used in the preparation and manufacture of high and low boil confectionery • potential product defects and their causes which may arise in the preparation and manufacture of high and low boil confectionery • the interrelationships between suppliers of products and internal/external customers • critical factors in the preparation and manufacture of high and low boil confectionery • solubility and crystallization properties of ingredients used and their relationship to texture • relationship of the boiling point of a confectionery syrup to its soluble solids content • the relationship of pressure and vacuum to the boiling point of a confectionery syrup of a specific soluble solids content and the uses made in production of this relationship • the concept of equilibrium relative humidity (ERH) or water activity (Aw) of a confectionery product • Resource requirements for the preparation and manufacture of high and low boil confectionery. • testing procedures for raw materials through to manufactured product • stages of production, CCPs and critical limits • packaging procedures • quality and continuous improvement processes • sensory analysis techniques and analysis • safe systems of work
Underpinning Skills	Demonstrates skills to: • interpret market specifications for high and low boil confectionery • select the formulation, method of manufacture, method of forming and packaging of high and low boil confectionery • implement a production schedule to ensure all resources and requirements are available and meet company requirements

	• set the production system to operating specifications before and during production • implement the production system for the preparation and manufacture of high and low boil confectionery • identify the potential product defects and their causes which may arise in the preparation and manufacture of high and low boil confectionery • Determine and implement a system used to identify defects in the preparation and manufacture of high and low boil confectionery. • implement adjustments to process/equipment as identified • report problems to designated person according to company policies and procedures
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Implement and Review the Processing of Confectionery Products**
Unit Code	**IND COP4 04 0613**
Unit Descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for the preparation and manufacture of confectionery products.

Elements	Performance Criteria
1 Prepare for the manufacture of confectionery products.	1.1 The statutory compositional ***OHS requirements*** for the different types of confectionery products are established. 1.2 The required formulation of ***confectionery products*** is selected. 1.3 The appropriate production system and the preferred sequence of activity to prepare the system for operation is selected. 1.4 Equipment is prepared and safe operating procedures accessed for its operation.
2 Monitor the manufacture of confectionery products to ensure quality standards are met	2.1 Production schedule is implemented to ensure all resources and requirements are available and meet company requirements. 2.2 Production system is set to operating specifications before and during production. 2.3 Concentration and drying procedures are implemented and monitored 2.4 Data requirements appropriate for food safety, quality and production standards are identified 2.5 Data collection points consistent with equipment capabilities and data requirements are identified 2.6 Procedures to deal with non-conformance in relation to process and the final product are developed. 2.7 Process control system is implemented and monitored.
3 Diagnose, rectify and/or report problem arising from the preparation and manufacture of confectionery products	3.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of food 3.2 Identified adjustments are implemented to inputs, process & equipment. 3.3 Problems are reported to designated person according to company ***policies and procedures***.

Variable	Range
OHS requirements	• legislation, regulations, Codes of practice • Safety Data Sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Confectionery products	• These may include the range of confectionery products including chocolate and compound chocolate • Confectionery, sugar confectionery types, "sugar free" confectionery types, liquorices, gum based types, extruded products and panned product types.
Policies and procedures	• Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
Legislation	• Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labeling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Prepare for the manufacture of confectionery products. • Monitor the manufacture of confectionery products to ensure quality standards are met • Diagnose, rectify and/or report problem arising from the preparation and manufacture of confectionery products • Review production processes
Underpinning Knowledge	• the range of confectionery products including chocolate and compound chocolate • Confectionery, liquorice (both straps and all sorts), sugar confectionery types, "sugar free" confectionery types, gum based types and panned product types. • Production systems used for the preparation, manufacture, forming and packaging of the range of confectionery products described above. • the production system for the preparation and manufacture of confectionery products including production instruction, quality assurance requirements and or/specifications, production specification and or/standards, production equipment, production procedures, cleaning procedures and materials and raw materials • different formulations for confectionery products • the role of the major ingredients found in confectionery products

	• preparation and manufacture of extruded products including product preparation, cooking and processing, extrusion, packaging, and storage and distribution • critical factors in the preparation and manufacture of confectionery products • resource requirements for the preparation and manufacture of confectionery products • the interrelationships between suppliers of products and internal/external customers • identification of defects during production and of final products • stages of production, CCPs and critical limits • packaging procedures • quality and continuous improvement processes • sensory analysis techniques • safe systems of work
Underpinning Skills	Demonstrates skills to: • interpret market specifications for confectionery products • plan the production processes related to confectionery products • monitor the output of each of the processes used in the preparation and manufacture of confectionery products • manage production systems for preparation and manufacture of confectionery products • check product against market specifications for confectionery • manage the processes used in the preparation and manufacture of confectionery products • Operate equipment and accessories used in the preparation and manufacture of confectionery products.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Implement and Review the Processing of Aerated Confectioneries**
Unit Code	**IND COP4 05 0613**
Unit Descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for preparation and manufacture of aerated confectioneries

Elements	Performance Criteria
1. Prepare for the manufacture of aerated confectioneries.	1.1 The statutory compositional ***OHS requirements*** for the different types of aerated confectioneries are established. 1.2 The required formulation of ***aerated confectioneries*** is selected. 1.3 The appropriate production system and the preferred sequence of activity to prepare the system for operation is selected. 1.4 Equipment is prepared and safe operating procedures accessed for its operation
2. Monitor the manufacture of aerated confectioneries to ensure quality standards are met.	2.1 A production schedule is implemented to ensure all resources and requirements are available and meet company requirements. 2.2 Production system is set to operating specifications before and during production. 2.3 Data requirements and collection points appropriate for food safety, quality and production standards are interpreted or documented 2.4 Procedures to deal with non-conformance in relation to process and the final product are developed. 2.5 Concentration and drying procedures are implemented and monitored 2.6 Process control systems are implemented and monitored
3. Diagnose, rectify and/or report problem arising from the preparation and manufacture of aerated confectioneries	3.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of food 3.2 Identified adjustments to inputs, process & equipment are implemented. 3.3 Problems are reported to designated person according to company ***policies and procedures***.

Variable	Range
OHS requirements	May include: • legislation, regulations, Codes of practice • Safety Data Sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Aerated confectioneries	May include: • These include all confectionery products where the texture and/or appearance have been altered by the inclusion of small bubbles of air or other gases. This could include such diverse products as marshmallow where substantial amounts of air are included to give a light texture through to high boil masses where air is pulled into a viscous mass to change the appearance of the product. Bubble formation could also be by the heat action on, for • Example, sodium bicarbonate, as in honeycomb confectionery. Can be consumed as is or included as a centre for, say, chocolate enrobing, molding or panning.
Policies and procedures	Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
Legislation	are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labeling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.

Evidence Guide	
Critical Aspects of Competency	Critical aspects of assessment must include evidence of the ability to manufacture aerated confectioneries to specification including: • implementing process control procedures and data collection; • diagnosing and reporting problems for manufacturing; • carrying out sensory evaluation and product testing; and • Reviewing the production system for food safety and quality and environmental impact.
Underpinning Knowledge	Demonstrates knowledge of: • the range of aerated confectioneries including chocolate, fat based fillings, nougats, jelly foams, marshmallows, high boils, and brittles • the formulation, method of manufacture, method of forming and packaging of aerated confectioneries • the range of aerated confectioneries including chocolate, fat based fillings, nougats, jelly foams, marshmallows, high boils, and brittles

	• The processes used to aerate different confectionery masses and form theses masses to maintain the desired degree of aeration. • identify the role of the major ingredients found in aerated confectioneries • the role, properties and use of different aerating agents • critical aspects of product aeration including product viscosity, bubble size, product graining or crystallizing • production systems used for the preparation and manufacture of aerated confectioneries • preparation and manufacture of aerated confectioneries including packaging, storage and distribution • different types and formulation of aerated confectioneries • potential product defects and their causes, which may arise in the preparation and manufacture of aerated confectioneries • stages of production, CCPs and critical limits • packaging procedures • resource requirements for the preparation and manufacture of aerated confectioneries • quality and continuous improvement processes • sensory analysis techniques • safe systems of work
Underpinning Skills	Demonstrates skills to: • interpret market specifications for aerated confectioneries • select the formulation, method of manufacture, method of forming and packaging of aerated confectioneries • monitor the output of each of the processes used in the preparation and manufacture of aerated confectioneries • Carry out processes to aerate different confectionery masses and form theses masses to maintain the desired degree of aeration. • operate each process used in the preparation and manufacture of aerated confectioneries • operate equipment and accessories for the preparation and manufacture of aerated confectioneries • identify defects during production and of final products
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Implement and Review the Production of Gums and Jellies**
Unit Code	**IND COP4 06 0613**
Unit Descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for preparation and manufacture of gums and jellies.

Elements	Performance Criteria
1. Prepare for the manufacture of gums and jellies.	1.1 The statutory compositional ***OHS requirements*** for the different types of gums and jellies is established 1.2 The required formulation of gums and jellies is selected. 1.3 The appropriate production system and the preferred sequence of activity to prepare the system for operation is selected. 1.4 Equipment is prepared and safe operating procedures accessed for its operation
2. Monitor the manufacture of gums and jellies to ensure quality standards are met.	2.1 A production schedule is implemented to ensure all resources and requirements are available and meet company requirements. 2.2 Production system is set to operating specifications before and during production. 2.3 Data requirements and collection points appropriate for food safety, quality and production standards are interpreted or documented 2.4 Procedures to deal with non-conformance in relation to process and the final product are developed. 2.5 Cooking and moulding procedures are implemented and monitored. 2.6 Process control systems are implemented and monitored confectioneries.
3. Diagnose, rectify and/or report problem arising from the preparation and manufacture of gums and jellies	3.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of food. 3.2 Identified adjustments to inputs, process & equipment are implemented. 3.3 Problems are reported to designated person according to company ***policies and procedures***.

4. Review production processes	4.1 The Critical Control Points (CCPs) and critical limits for product safety are reviewed 4.2 A sampling plan is developed and implemented 4.3 Sensory analysis is conducted and analysed

Variable	**Range**
OHS requirements	May include: • legislation, regulations, Codes of practice • Safety Data Sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Policies and procedures	May include: • Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
Legislation	May include: • Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labeling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.

Evidence Guide	
Critical aspects of Competence	Demonstrates skills and knowledge in: • Critical aspects of assessment must include evidence of the ability to manufacture gums and jellies to specifications including: implementing process control procedures and data collection; diagnosing and reporting problems for manufacturing; carrying out sensory evaluation and product testing; and reviewing the production system for food safety and quality and environmental impact.
Underpinning Knowledge and Attitudes	Demonstrates knowledge and Attitude of: • The formulations, methods of manufacture, methods of forming and packaging of gums and jellies. • the range of gelatinised products including "gummi" and other types of starch moulded products, licorice and Turkish delight, and their formulations • Processes used to gelatinise different confectionery masses and form these masses to maintain the desired product shape. • the role of the major ingredients found in gums and jellies • The role, properties and use of different gelatinising agents such as gelatine, starches, pectins and agar.

	• critical factors in the preparation and manufacture of gums and jellies • the production system for the preparation and manufacture of gums and jellies including production instruction, quality assurance requirements and or/specifications, production specification and or/standards, production equipment, production procedures, cleaning procedures and materials and raw materials • potential product defects and their causes, which may arise in the preparation and manufacture of gums and jellies • the interrelationships between suppliers of products and internal/external customers • stages of production, CCPs and critical limits • resource requirements for the preparation and manufacture of gums and jellies • packaging procedures • quality and continuous improvement processes • sensory analysis techniques • safe systems of work
Underpinning Skills	Demonstrates skills to: • interpret market specifications for gums and jellies • plan the production processes related to gums and jellies • monitor the output of each of the processes used in the prepara of gums and jellies • finish gelatinised products to prevent sticking • check product against market specifications • operate equipment and accessories for the preparation and mar jellies • identify defects during production and for final production
Resources Implication	Access is required to real or appropriately simulated situations including work areas; materials and equipment and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Implement and Review the Production of Chocolate Products**
Unit Code	**IND COP4 07 0613**
Unit Descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for preparation and manufacture of chocolate products.

Elements	Performance Criteria
1. Prepare for the manufacture of chocolate products.	1.1 The statutory compositional ***OHS requirements*** for the different types of chocolate products are established. 1.2 The required formulation and design of ***chocolate products*** is selected. 1.3 The appropriate production system and the preferred sequence of activity to prepare the system for operation are selected. 1.4 Equipment is prepared and safe operating procedures accessed for its operation.
2. Monitor the manufacture of chocolate products to ensure quality standards are met.	2.1 Bulk chocolate is sourced to meet the product specifications 2.2 A production schedule is implemented to ensure all resources and requirements are available and meet company requirements. 2.3 Production system is set to operating specifications before and during production. 2.4 Data requirements and collection points appropriate for food safety, quality and production standards are identified 2.5 Procedures to deal with non-conformance in relation to process and the final product are developed. 2.6 Process control systems are implemented and monitored confectioneries.
3. Diagnose, rectify and/or report problem arising from the preparation and manufacture of chocolate products	3.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of chocolate products. 3.2 Identified adjustments to inputs, process & equipment are implemented. 3.3 Problems are reported to designated person according to company ***policies and procedures.***
4. Review production processes	4.1 The Critical Control Points (CCPs) and critical limits for product safety are reviewed 4.2 A sampling plan is developed and implemented. 4.3 Sensory analysis is conducted and analysed. 4.4 Food tests are undertaken and data generated for the product label. 4.5 Safe work systems are reviewed for processing of chocolate products.

Variable	Range
OHS requirements	May include: • legislation, regulations, Codes of practice • Safety Data Sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Chocolate products	May include: • Chocolate products include all confectionery products that include chocolate or compound chocolate in a recognizable solid form including molded bars, blocks or shapes, molded and enrobed filled chocolate pieces, hollow goods such as eggs or seasonal figures, and deposited items such as drops or nut clusters. Chocolate products can be consumed as is or included as a centre for further processes such as sugar panning.
Policies and procedures	May include: • Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
Legislation	May include: • Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labeling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.

Evidence Guide	
Critical Aspects of Competency	Critical aspects of assessment must include evidence of: • implementing process control procedures and data collection; • diagnosing and reporting problems; • carrying out sensory evaluation and product testing; and • Reviewing the production system for food safety and quality and environmental impact.
Underpinning Knowledge	Demonstrates knowledge of: • Types of chocolate and compound chocolate and the ingredients used to manufacture each. • critical factors in the preparation and manufacture of chocolate products • Forming processes used in the manufacture of chocolate products such as enrobing, moulding (shell, one-shot, pocket, etc.), hollow goods moulding ("spinning"), drop depositing and cluster depositing. • The role of tempering especially, with regard to chocolate, and its relationship to key product attributes such as shine, bloom formation, snap, hardness and shrinkage.

	• The rheological properties (plastic viscosity and yield value) of liquid chocolate and their relationship to the forming process used. • the role of the major ingredients found in chocolate products • the production system for the preparation and manufacture of chocolate products including production instruction, quality assurance requirements and or/specifications, production specification and or/standards, production equipment, production procedures, cleaning procedures and materials and raw materials • cooling processes used for chocolate and compound chocolate identification of defects during production and of final products stages of production, CCPs and critical limits • resource requirements for the preparation and manufacture of chocolate products • product defects and their causes, which may arise in the preparation and manufacture of chocolate products • packaging procedures • quality and continuous improvement processes • sensory analysis techniques • safe systems of work
Underpinning Skills	Demonstrates skills to: • interpret market specifications for confectionery products • carry out the production processes related to chocolate products • monitor the output of each of the processes used in the preparation and manufacture of chocolate products • manage production systems for preparation and manufacture of chocolate products • check product against market specifications for chocolate products • operate equipment and accessories used for the preparation and manufacture of chocolate products • check product against market specifications
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Identify the Physical and Chemical Properties of Materials, Food and Related Products**
Unit Code	**IND COP4 08 0613**
Unit Descriptor	This unit covers the skills and knowledge required to identify the physical and chemical properties of materials, food and related products. It requires application of this knowledge to a production environment.

Elements	Performance Criteria
1. Apply understanding of common physical phenomena in the food industry	1.1. An understanding of common physical phenomena is applied to explain relevant changes that occur to ingredients and product through the production process. 1.2. Information on the changes that occur is communicated to others in appropriate formats.
2. Apply an understanding of the physical states of matter	2.1. The three states of matter and the atomic changes that occur at each phase are identified. 2.2. The behavior of each type of matter and its relationship to the production process is described. 2.3. The relationship between pressure and temperature in phase transition is identified.
3. Apply an understanding of common food science principles to a production process	3.1. The significance of pH for processing, food safety and cleaning applications is identified. 3.2. The reactions and properties of carbohydrates, proteins and fats can be tracked through a given process. 3.3. The properties of common emulsions, suspensions and solutions can be described. 3.4. Common chemical reactions that occur, factors required to cause a reaction and the effect of reactions can be identified. 3.5. Safe work procedures for processes requiring ***handling of processing of product and materials*** chemicals and/or involving chemical reactions are reviewed and/or established.
4. Communicate and interpret technical information	4.1. Appropriate technical terms are used to communicate information on properties of food and materials commonly used in the food industry. 4.2. Test results and reporting formats to communicate information on composition, properties and reactions are interpreted and applied.

Variable	Range
Handling and processing of product and materials	is consistent with company standards and requirements, legislative requirements, codes, industrial awards and agreements
Identification of molecular structure	can be supported by others and does not necessarily involve use of microscopes in a laboratory

Evidence Guide	
Critical Aspects of Competency	• identify physical and chemical characteristics of food materials and the impacts of production processes on these characteristics • identify common tests and measures to assess food materials • identify the characteristics of acids and bases and their application in food processing • identify the basic molecular structures of carbohydrates, proteins and fats • distinguish the difference between solutions, suspensions and colloidal systems • identify hazards and control methods in managing hazardous materials • Communicate technical information using correct technical terms, flow charts and sketches.
Underpinning Knowledge	• physical characteristics or phenomena that occur through processing and products and processes where these phenomena can be observed • tests commonly used to measure these phenomena and related units of measurement • molecular changes that occur in states of matter • transition phases that apply in a given production process • role of temperature and pressure in the transition process • differences between a strong acid and a concentrated acid and related units of measurement • classifications of commonly used materials, ingredients and indicators according to ph • typical strengths and concentration levels required for acids and bases commonly used in a production process • basic molecular structures of carbohydrates, proteins and fats • difference between solutions, suspensions and colloidal systems • typical applications of solutions, suspensions and colloidal systems in food processing • factors that the affect stability of colloidal systems • common chemical reactions that occur in food processing • role of enzymes in generating biological reactions

	• safety hazards and control methods • technical information resources
Underpinning Skills	• identify physical characteristics or phenomena that occur through processing, including the following common physical phenomena, and any additional phenomena appropriate to the production process: ➢ shear and strain ➢ friction ➢ surface tension ➢ pressure ➢ crystallization ➢ total solids ➢ heat and temperature ➢ relative humidity ➢ work/energy input ➢ viscosity ➢ particle size, melting points, boiling points, freezing points, dew/condensation point and other phenomena as appropriate to product/process • identify products and processes where these phenomena can be observed • based on phenomena that can be observed in a production process, develop explanatory sketches or flow charts to communicate how these phenomena affect product and process • identify tests commonly used to measure these phenomena and related units of measurement • identify molecular changes that occur in states of matter, and apply this to an understanding of common applications, such as refrigerant or freeze drying • for transition phases that apply in a given production process, identify the role of temperature and pressure in the transition process • identify the difference between acids and bases • classify commonly used materials, ingredients and indicators according to pH • identify the difference between a strong acid and a concentrated acid and related units of measurement used to describe these acids • identify typical strengths and concentration levels required for acids and bases commonly used in a production process (e.g. cleaning agents) • for cleaning agents, identify compatibility with equipment surface materials • identify the significance of pH for processing, food safety and cleaning applications

	• identify the basic molecular structures of carbohydrates, proteins and fats • identify the processing stages designed to affect the structure of these compounds (e.g. hydrogenation or denaturing proteins in cooking processes of oil) • Distinguish the difference between solutions, suspensions and colloidal systems. Colloidal systems include emulsions (oil in water/water in oil), sols (solid-liquid/solid-solid), gels and foams (gas-liquid/gas-solid) • identify typical applications of solutions, suspensions and colloidal systems in food processing • distinguish between dispersed particles and the dispersion medium in colloids • identify factors that the affect stability of colloidal systems, including the stages in a production process that can cause a change in the structure of a colloid • identify common chemical reactions that occur in food processing, including both spontaneous and controlled reactions (reactions to be covered include oxidation, enzymic, Maillard and acid-based reactions, and other reactions relevant to a given product type and production process) • identify the role of enzymes in generating biological reactions (e.g. amylase in bread) • identify safety hazards and control methods required when handling chemicals and working with processes that involve chemical reactions • review and/or develop workplace procedures to include advice on hazards and related instructions on control methods, including advice on action required in the event of an incident such as a chemical spill or an emergency • read and interpret technical information to describe food properties and/or reactions, including recognition and application of appropriate units of measurement and terms • use communication skills to interpret and complete work information to support operations of work team or area • demonstrate and support cooperative work practices within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Establish Operational Requirements for a Food Processing Enterprise**
Unit Code	**IND COP4 09 0613**
Unit Descriptor	This unit covers the skills and knowledge required to review and report on operational requirements and issues in a food processing enterprise.

Elements	Performance Criteria
1. Identify key issues and organisations that impact the Ethiopian food processing industry	1.1 The range of job roles and responsibilities for a food processing operation are described. 1.2 The environmental impacts of a food processing operation are determined. 1.3 Impacts of customer expectations for product integrity, quality, safety and nutritional value on food processing operations are explained. 1.4 The roles of key ***regulatory and industry bodies*** for a food processing sector are described.
2. Identify the sequence of operations for processing a range of products in a sector	2.1 Procedures for the assembling and preparation of ingredients are implemented. 2.2 The storage and handling requirements of ingredients for a food product are defined. 2.3 A flow chart for the processing operations for a food product is constructed. 2.4 Specifications for a food product are described and the methods used to ensure critical limits are complied with.
3. Explain factors affecting food safety and product quality during processing	3.1 Key food safety issues in food processing are described 3.2 Food safety procedures are implemented and reviewed 3.3 Hygiene procedures for a food processing operation are applied. 3.4 Factors affecting shelf life and spoilage in food products are explained. 3.5 The nature and purpose of a product testing program are defined.
4. Write and/or review standard operating procedures to comply with legislation relating to product and processing	4.1 Relevant legislation and regulations that apply to food production, packaging and labelling are identified. 4.2 The purpose and scope of relevant legislation is defined. 4.3 The roles and responsibilities of authorities responsible for administering legislation are identified. 4.4 Operational and product requirements to comply with legislation are defined. 4.5 A standard operating procedure is documented based on an organisation's templates and systems.

5. Define organisational requirements to comply with legislation relating to food premises, equipment design and storage facilities	5.1 ***Legislation*** and regulations that apply to food premises, storage facilities and ***materials, equipment and systems*** are reviewed. 5.2 The purpose and intent of relevant legislation is identified. 5.3 The roles and responsibilities of authorities responsible for administering legislation are identified. 5.4 Procedures are established and/or reviewed to support compliance with legal requirements.
6. Provide written reports and presentations on food processing issues	6.1 Areas of noncompliance or with potential for process improvement are identified. 6.2 Information is collected and problem solving strategies are used to review procedures. 6.3 Data, discussion and recommendations are presented in a formatted report. 6.4 Presentations which incorporate technical data and information are delivered.

Variable	**Range**
Industry and regulatory bodes	may include: • Industry funded marketing co-operatives, Research and Development Organizations (RDOs), certification bodies, federal regulatory agencies for OHS, environment and food safety, the Ethiopian Quarantine Inspection Service, export and third party auditors, and organizations sponsoring QA schemes.
Legislation	may include : • Acts of Parliament, regulations and statutes • Ethiopian Food Standards Code • Food Safety legislation (including provisions covering the design of food premises and equipment) • Local Authority regulations • Customs and excise legislation (for alcohol-based ingredients/materials) • Import and export legislation • Additional legislation as appropriate to product, process and market
Materials, equipment and systems	may include : • Heating and cooling equipment, size reduction systems, materials transfer equipment, heat exchangers, forming and shaping equipment • Major operations may include: material transfer, separation,

	size reduction, combining, heat exchange, biochemical transformation, and shaping and extrusion operations. • Operations include all food processing and preventative maintenance.
Occupational health and safety requirements	may include : • Codes of practice, regulations, Material Safety Data Sheets (MSDSs) • Enterprise specific requirements • Relevant Occupational Health and Safety acts, regulations, national standards, codes of practice and guidance notes which may apply in jurisdiction • Examples of specific task related procedures may include: • handling of chemicals • use of personal protective equipment (PPEs)

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: • Candidates must be able to demonstrate the ability to establish and/or review procedures to support compliance and report on process improvement issues. Assessment must also include evidence of an understanding of: the role of industry organizations and job roles within the industry; systems, roles and procedures in place for food safety and QA; • And legal requirements for the packing, production and labeling operations of a food production enterprise.
Underpinning Knowledge	Demonstrates knowledge of: • industry organisations and representative bodies in food processing • the environmental impacts of a food processing operation • customer expectations and community perceptions of the food processing industry • emerging technologies in food processing • food testing methods • procedures for QA and food safety • legal responsibilities of a food processing company relating to product content and packaging • the purpose and intent of relevant legislation • potential hazards that could be introduced as a result of equipment design and configuration • associated risks in handling chemicals and dangerous goods • recording requirements to comply with legislative requirements • recording procedures • report templates and protocols • oral and written communication strategies and protocols

	• relevant authorities responsible for administering legislation and their roles
Underpinning Skills	Demonstrates skills to: • describe industry organisations and their role • define job roles and responsibilities for the food processing industry • define the ingredients, operations and product specifications for a food processing operation • define the inputs and outputs of a food processing operation, including the use of non-renewable resources and impacts on air, soil, water and atmospheric CO_2 levels • Identify the legal responsibilities of a food processing company. This includes responsibilities relating to: • product content (Food Standards Code) • product packaging and labelling, including use of nutritional information panels (Food Standards Code) • design requirements of food premises and equipment • requirements of storage facilities used for materials, ingredients and final product • other requirements as appropriate to the product and/or market (e.g. import and/or export legislation) • identify and/or develop specifications and procedures to ensure that legal responsibilities related to product content and packaging are achieved • Inspect plant design to identify potential hazards that could be introduced as a result of equipment design and configuration. For example, overhead pipes or equipment where dust could collect and fall into food. Where hazards are identified, apply the hierarchy of control to identify opportunities to remove or control the risk • Identify storage facilities across a production site. Identify the dangerous goods stored on site and confirm that storage of these goods (type and quantity) meets legal requirements • confirm that employees required to handle chemicals and dangerous goods are advised of the associated risks, that this information is available in a form appropriate to the audience and that Material Safety Data Sheets are available • develop and/or review recording systems to confirm compliance with legislative requirements and ensure that employees responsible for recording information are informed of these responsibilities • establish internal review/audit procedures to confirm that legislative responsibilities are met • Within each area of legislation applying to the activities of a food processing facility, identify the relevant authority

	responsible for administering the legislation. Identify the rights and responsibilities of related officers to access the production site • Present technical information in a written format and as a presentation.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Conduct Food Safety Audits**
Unit Code	**IND COP4 10 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to verify and confirm validation of food safety programs in the context of food safety legislation and client requirements.

Elements	Performance Criteria
1. Define the scope of the audit	1.1. ***Audit scope*** is identified and defines the extent of the audit to meet legislative and audit client requirements. 1.2. Audit criteria is made to meet legislative and client requirements. 1.3. The definition and levels of non-conformity and related reporting responsibilities are identified consistent with legislative requirements and client requirements. 1.4. Evidence required to address audit scope and criteria is identified and appropriate ***evidence collection methods*** are selected. 1.5. Food safety management system documents are reviewed to determine adequacy for the purposes of the audit.
2. Plan the audit	2.1. An audit plan is developed that includes definitions and levels of non-conformity to meet the audit scope. 2.2. Activities and responsibilities for the audit are identified. 2.3. Audit timing (as required by ***legislation*** and/or client is identified, including timetable for each stage of the audit. 2.4. ***Resource requirements***, personnel and reporting requirements are identified. 2.5. Follow up and completion procedures are identified. 2.6. Communication protocols are established to facilitate the effective exchange of information and suited to the ***auditee*** environment.
3. Conduct the audit	3.1. Information on the audit scope and methodology is communicated in an effective and timely manner. 3.2. Stages and activities of the audit process are followed. 3.3. Methods used by the ***food business*** to carry out ***preliminary work***, identify food safety hazards and assess level of risk are reviewed to confirm that they are appropriate and correctly applied.

	3.4. Evidence used by the food business to support identification of control measures and establish control limits is identified and evaluated to determine adequacy and relevance. 3.5. Methods used by the food business to control hazards and determine corrective action where processes are identified as not meeting targets or critical limits are reviewed to confirm they are adequate, effective and appropriate. 3.6. Evidence is collected to confirm that the documented food safety policies and procedures are working effectively, reflect actual practice and are consistently applied.
4. Manage the audit process	4.1. Audit progress is monitored against the audit plan and any variation to plan is identified and addressed. 4.2. Circumstances requiring the audit plan to be adjusted are identified and negotiated in a timely manner. 4.3. Audits address audit scope and are conducted within time and resource constraints to meet quality and professional standards. 4.4. The audit process is reviewed to identify opportunities for improvement.
5. Consolidate audit outcomes	5.1. Evidence is analyzed and assessed to identify any areas of non-compliance with legislation and/or ***audit client requirements*** as appropriate to the audit scope. 5.2. ***Non-conformities*** are identified and classified as agreed by the audit plan. 5.3. Non-conformities are reported in accordance with agreed client and/or legislative requirements. 5.4. Audit findings are communicated to the auditee. 5.5. Audit reports and/or certificates are prepared and submitted or presented as required to meet regulatory and client requirements. 5.6. Corrective actions proposed by the auditee in response to non-conformances are reviewed for compliance with the template or food safety program. 5.7. Audit findings are reviewed to confirm that evidence is appropriate and sufficient and findings are accurate to ***validate*** the food safety program is complete. 5.8. ***The food safety management system*** is reviewed to identify areas of potential improvement of the system according to audit scope.

6. Confirm and close out corrective actions	6.1. Implementation and effectiveness of corrective actions are monitored and ***verified*** and any variation to the food safety plan is identified and addressed. 6.2. ***Audit records*** are maintained to record corrective actions.

Variable	**Range**
Audit scope	describes the purpose, extent and boundaries of the audit. This may include: • physical locations • products • processes • time period covered by the audit • extent of authority of the auditor
Evidence collection methods	and sources will depend on the purpose and scope of the audit and may include: • observation • interviews • checklists • audited documentation review • reports/data from other sources, such as customer feedback, technical references, computerised databases • results of analyses
Legislation	May include: • arrangements are determined by system owners
Resource requirements	will depend on the purpose and scope of the audit and may include: • audit personnel directly involved in undertaking the audit • access to relevant personnel and information within the business • access to any additional resources as required
Auditee	May include: • Auditee refers to the organisation being audited
Food businesses	May include: • A food business refers to a business, vehicle, enterprise or activity where food is produced, processed, stored, displayed, transported and/or sold. It may also include primary producers
Preliminary work	includes but is not limited to: • identifying food to be covered by the food safety program • defining the food and the method of distribution • identifying customers and intended use of food • describing the process (flowchart) • checking for accuracy and completeness of the previous steps

Audit client requirements	are typically defined in audit contracts or agreements and may relate to: • legal requirements • food safety management system requirements • compliance with client site operational policies and procedures • confidentiality • business size, activities and processes • business culture • professional standards of conduct
Non-conformity	Are defined and based on food safety risk. They may be determined by: • the management system • the audit client • legislation • where legislation applies, definitions may be determined by: • state and territory authorities • AQIS • primary industry jurisdiction • primary food production jurisdiction
Validation	May include: • Validation refers to obtaining evidence to confirm that a HACCP-based food safety program is complete and effective and will deliver the expected food safety outcomes
Food safety management system	is a documented arrangement implemented (and resourced) by a business for control of food safety. A food safety management system includes: • Commitment from management, procedures and practices to identify and control food safety hazards and prevent their recurrence. It may incorporate recognised food safety tools, such as HACCP and its prerequisite programs
Verification	refers to methods and procedures used to carry out monitoring, including sampling and testing to provide evidence that the specifications set by relevant legislation and codes of practice continue to be met
Audit records	are maintained to demonstrate the implementation of the audit process. These may include but are not limited to: • audit plans • audit reports • non-conformity reports • corrective action reports • follow up reports
Food safety audits	• Audits may be conducted for either regulatory or commercial food safety systems for low, medium or high risk food safety hazards

Legal requirements	The scope of the audit determines and may be determined by food safety legislation which may include: • Food Standards Code • relevant state legislation and related codes of practice, including industry sector-specific legislation and related codes of practice, such as those relating to meat, seafood, dairy and primary production and processing • regulatory and commercial requirements relevant to importing countries • commonwealth legislation (e.g. Export Control Act) • other legislation which may impact on the conduct of a food safety auditor and may include legislation covering: • OHS, anti-harassment, anti-discrimination and industrial relations • trade practices legislation • environmental risk management • legal contracts or agreements
Audit client	May include: • Refers to the organization or person requesting an audit (system owner). This may be the same as the auditee or any other organization which has the regulatory or contractual right to request an audit. • The system owner may be the regulator
Audit criteria	Must comply with relevant food safety legislation and may extend to address additional system owner/client requirements. In addition to meeting the requirements of food safety legislation, reference against which conformity is determined may include: • management systems policies and procedures • industry standards or codes • contractual requirements • international treaties and conventions
Audit evidence	Evidence required for the purposes of meeting relevant food safety legislation may be defined by: • the client and/or the regulatory authority • Audit evidence should be based on objective information rather than hearsay and may include: • system records • evidence collection records • statements of fact or other information relevant to the audit criteria and which is verifiable • observations • records of audit stage progression

Close out	May include: • Auditors have different levels of responsibility and authority to close out audits according to the level of non-conformity and whether they are an authorized officer or a commercial auditor. Closing out may involve notifying the regulator with the power to enforce legislation
Commercial auditor	May include: • Commercial auditor refers to any auditor other than a regulatory auditor, who is external to and independent of the food business being audited
Risk-based approaches	May include: • Risk-based approaches to controlling food safety are typically based on HACCP, described in the Codex Alimentations guidelines
Prerequisite programs	May include: • Prerequisite programs are also referred to as support programs, such as Good Manufacturing Practice (GMP), Good Agricultural Practice (GAP) and Good Hygiene Practice (GHP) • Prerequisite programs can be divided into two categories. • Infrastructure and maintenance programs. These may include: • layout, design and construction of buildings and facilities • supplies of air, water, energy and other utilities • equipment, including preventative maintenance, sanitary design and accessibility for maintenance and cleaning • support services, including waste and sewage disposal Operational prerequisite programs. These may include: • personal hygiene • cleaning and sanitation • pest control • measures for the prevention of cross-contamination • packaging and labelling procedures • supplier assurance • chemical storage • employee training • maintenance • calibration • document control • internal audit programs • traceability and recall programs • on-farm food safety schemes • inspecting and testing regimes, including analytical and microbiological testing

Critical control point	May include: • Critical control point is a step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level
Critical limit	May include: • Critical limit refers to criterion which separates acceptability from unacceptability

Evidence Guide	
Critical Aspects of Competency	Evidence of the ability to: • Identify food safety legislation applying to a food business. Legislative requirements may relate to actual or hypothetical food businesses. A minimum of two scenarios must be covered providing that at least one food business operates in a market segment that has to meet compliance requirements in place of or in addition to the Food Standards Code. One such market segment is export meat processors who must comply with the Export Control Act and the Export Meat Orders. • The assessment activity must: ➢ Identify the relevant legislation applying to the food business taking account of the industry sector, range of food handling activities undertaken and the markets into which products and/or services are sold. ➢ Locate advice on relevant authorities and enforcement agencies in a state or territory and for international markets as appropriate. ➢ Explain the legal responsibilities of a given food business. • Plan and conduct an audit that complies with legal and client requirements as appropriate. The criteria and evidence requirements may be developed to apply to an actual or hypothetical food business. The assessed must substantiate: • How audit scope and criteria meet legislative and client requirements. • The evidence required to assess compliance with the criteria and to support an objective, reliable and consistent audit outcome. • Definitions, levels and related reporting of non-conformance to comply with legislative requirements. • Submit completed audit records for the selected audit including the final audit report, non-conformity reports, corrective action reports, follow up reports and suggestions for improvements to the food safety management system and to the audit process. These latter items may be documented in personal notes rather than part of the formal audit report according to the audit scope.

Underpinning Knowledge	Demonstrate the Knowledge of: • audit activities and stages, including guidelines on audit stages and activities as outlined in ISO 19011:2002 • personal attributes required of food safety auditors, including those outlined in ISO 19011:2002, and additional client requirements where required • role, responsibilities and powers of enforcement agencies, authorised officers and commercial auditors, including reporting responsibilities, legal liability of auditors and delegation of authority to commercial auditors as may apply in some states and territories • relevant competencies and certification/registration criteria and processes applying to both regulatory and commercial auditors • audit management to develop and implement an audit against an agreed plan, including the scope/level of authority to revise the resource and allocate time allocations to take account of variation to plan • purpose and intent of each element of a food safety management system • the underlying principles of risk-based approaches to controlling food safety hazards, including HACCP as described in the Codex Alimentary Guidelines • vocabulary and terms relating to food safety, including terms and jargon to describe technical processes, industry standards and common biological and chemical terms • food safety management system knowledge relevant to the system being audited., including system requirements, definitions and levels of non-compliance and related reporting responsibilities as defined by legal and management system requirements • the interaction between different types of management systems, including the impact of food safety decisions on other management systems, such as Occupational Health and Safety (OHS), quality, environmental risk management and animal welfare • technical knowledge required to assess the adequacy of the food safety management system performance and corrective actions • role of prerequisite programs in controlling hazards, including the relationship between prerequisite programs and risk-based approaches, such as HACCP to controlling food safety hazards • information handling and management system protocols, including issues, such as rights of access to information, maintenance of confidentiality of audit information and reports and information dissemination requirements

	• the purpose and intent of food safety legislation, including sources of information on importing country requirements and of requirements of countries and retailer driven systems in importing markets • the content covered by the Food Standards Code and/or other relevant standards • the structure and responsibilities of commonwealth, state and territory government departments and local government to manage and implement food safety legislation, including where to find information on relevant commonwealth, state/territory legislative requirements, product or industry sector legislation and regulations and import and export market requirements • the regulatory framework and specific legislation relevant to the audit, including relevant risk profiling or classification systems where they apply • sources of information on legislation and codes governing primary production and primary processing • requirements for scheduling and conducting further auditing as determined by food safety legislation and/or client system requirements • legal liability of auditors and protection against litigation and professional practice issues, including the circumstances under which an auditor could be prosecuted and insurance requirements • the role of auditors when called on to provide evidence as a witness in court • preliminary work required to identify food to be covered by the food safety program, define the food and the method of distribution, identify customers and intended use of food, describe the process (flowchart) and check accuracy and completeness • methods used identify food safety hazards and assess food safety hazard risk levels taking account of severity and likelihood of occurrence • methods used to identify critical control points and establish critical limits, suited to the nature of the hazard, the requirements of the audit and the industry sector • methods used to validate control techniques and critical limits, including industry or sector codes of practice, technical standards and research • types of evidence, including the difference between objective and hearsay evidence and methods for recording and managing evidence to provide reliable reference information in the event that evidence is challenged

	• evidence collection methods, including record sampling and sample analysis, and the evidence collection options relevant to a given audit situation, the reliability of each collection method and the range/extent of evidence collection methods required to ensure that audit outcomes are objective, consistent, fair and reliable • methods to assess skill requirements and options to confirm that the responsible personnel within the food business have the required skills and knowledge of food safety and food hygiene relevant to the food business • circumstances, implications and responsibilities in the event that the auditee requests that the audit ceases • circumstances and authority of an auditor to initiate cessation of an audit • understanding of the context in which audits are conducted, including workplace culture and preferred communication methods, industry, process and/or product knowledge and related jargon • information recording requirements and audit reporting requirements
Underpinning Skills	Demonstrate the skill of: • locate relevant commonwealth, state and/or territory legislation, regulations and related codes of practice and determine the legal responsibilities of food businesses relevant to the industry sector • plan and manage audit activities • communicate information in ways appropriate to the purpose and the audience and to facilitate opening and closing meetings • negotiate and facilitate audit processes, including following meeting procedures and resolving issues • select and use research skills relevant to audit activities, including researching technical sources to validate food safety programs and collecting evidence to support verification • consolidate audit findings based on objective evidence • prepare records and reports appropriate to the purpose of the audit and the needs of the auditee and the client (system owner/regulator)
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Implement Operational Plan**
Unit Code	**IND COP4 11 0613**
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to implement the operational plan by monitoring and adjusting operational performance, producing short term plans for the department/section, planning and acquiring resources and providing reports on performance as required.

Elements	Performance Criteria
1. Implement operational plan	1.1. Details of ***resource requirements*** are collated, analyzed and organized in consultation with ***relevant personnel***, ***colleagues and specialist resource managers***. 1.2. ***Operational plans*** are implemented to contribute to the achievement of organization's performance/business plan. 1.3. ***Key performance indicators (KPIs)*** are identified and used to monitor operational performance. 1.4. ***Contingency planning*** and ***consultation processes*** are undertaken. 1.5. Assistance in the development and presentation of proposals is provided for resource requirements in line with operational planning processes.
2. Implement resource acquisition	2.1. Employees within ***organization's policies***, ***practices and procedures*** are recruited and inducted. 2.2. Plans are implemented for acquisition of physical resources and services within organization's policies, practices and procedures and in consultation with relevant personnel.
3. Monitor operational performance	3.1. ***Performance systems and processes*** are monitored to assess progress in achieving profit/productivity plans and targets. 3.2. Budget and actual financial information is analyzed and used to monitor profit/productivity performance. 3.3. Unsatisfactory performance is identified and prompt action taken to rectify the situation according to organizational policies. 3.4. Mentoring, coaching and supervision are provided to support individuals and teams to use resources effectively, economically and safely. 3.5. Recommendations are presented for variation to operational plans to the ***designated persons/groups*** and gain approval.

	3.6. ***Systems***, ***procedures and records*** associated with performance are implemented in accordance with organization's requirements.

Variable	Range
Resource requirements	may include: • goods and services to be purchased and ordered • human, physical and financial resources - both current and projected • stock requirements and requisitions
Relevant personnel, colleagues and specialist resource managers	may include: • colleagues and specialist resource managers • managers • occupational health and safety committees and other people with specialist responsibilities • other employees • people from a wide range of social, cultural and ethnic backgrounds, and people with a range of physical and mental abilities • supervisors
Operational plans	may include: • organisational plans • tactical plans developed by the department or section to detail product and service performance
Key performance indicators	may include: • measures for monitoring or evaluating the efficiency or effectiveness of a system, and which may be used to demonstrate accountability and to identify areas for improvements
Contingency planning	may include: • contracting out or outsourcing human resources and other functions or tasks • diversification of outcomes • finding cheaper or lower quality raw materials and consumables • increasing sales or production • recycling and re-use • rental, hire purchase or alternative means of procurement of required materials, equipment and stock • restructuring of organisation to reduce labour costs • risk identification, assessment and management processes • seeking further funding • strategies for reducing costs, wastage, stock or consumables • succession planning

Consultation processes	may include: • mechanisms used to provide feedback to the work team in relation to outcomes of consultation • meetings, interviews, brainstorming sessions, email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual operational plans
Organization's policies, practices and procedures	may include: • organisational culture • Standard Operating Procedures • organisational guidelines which govern and prescribe operational functions, such as the acquisition and management of human and physical resources • undocumented practices in line with organisational operations
Performance systems and processes	may include: • informal systems used by frontline managers for the work team in the place of existing organisation-wide systems • formal processes within the organisation to measure performance, such as: ➢ feedback arrangements ➢ individual and teamwork plans ➢ KPIs and specified work outcomes
Designated persons/groups	may include: • other affected work groups or teams and groups designated in workplace policies and procedures • those who have the authority to make decisions and/or recommendations about operations such as workplace supervisors, other managers
Systems, procedures and records	may include: • databases and other recording mechanisms for ensuring records are kept in accordance with organisational requirements • individual and team performance plans • organisational policies and procedures relative to performance

Evidence Guide	
Critical Aspects of Competency	Demonstrate knowledge and skills of: • ability to monitor and adjust operational performance, produce short-term plans for the department or section, plan and acquire resources, and provide reports on performance as required • Knowledge of principles and techniques associated with monitoring and implementing operations and procedures.
Underpinning Knowledge	Principles and techniques associated with: • contingency planning • methods for monitoring and reporting on performance

	• monitoring and implementing operations and procedures • problem identification and methods of resolution • relevant budgeting and financial analysis, interpretation and reporting requirements • resource management systems at the tactical implementation level • resource planning and acquisition • Tactical risk analysis including identification and reporting requirements.
Underpinning Skills	Demonstrate skills in: • coaching and mentoring skills to provide support to colleagues • literacy skills to access and use workplace information, and to prepare reports • Planning and organising skills to monitor performance and to sequence work of self and others to achieve planned outcomes.
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Apply an Understanding of Food Additives**
Unit Code	**IND COP4 12 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to recognize the characteristics and functions of food additives, preservatives, colors and flavors used in food products.

Elements	Performance Criteria
1. Identify additives used in food	1.1. Types of food additives and common additives used in food products are identified. 1.2. Functions of food additives are identified. 1.3. Legal requirements relating to use of food additives are identified. 1.4. Legal and quality consequences of incorrect additive addition are identified
2. Manage use of additives in a production process	2.1. Additives ***group*** used in product range produced in the production process is identified. 2.2. Methods of addition are suited to food additive and production requirements. 2.3. Procedures are reviewed and/or established for safe handling and addition of food additives. 2.4. Handling, use and disposal of additives are conducted in accordance with environmental standards of ***policies and procedures***.

Variable	Range
Groupings	include but are not limited to: • preservatives • anti-oxidants • acidulates • organoleptic and nutritional modification agents • colours and flavours, including synthetic and natural, oil and water soluble and lakes (dispersion in oil - applying to colours only) • technological aids
Policies and procedures	May include: • Handling of food additives, preservatives, colors and flavors and related work processes are consistent with company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements and takes account of OHS and environmental impact

Evidence Guide	
Critical Aspects of Competency	Demonstrate knowledge and skills to: • identify legal, company and quality standards for food additives • identify main additives and groupings • describe the function and user requirements for additives • manage the use of additives to ensure product quality standards are achieved
Underpinning Knowledge	Demonstrate the Knowledge of: • types of food additives and common additives used in food products • the functions of food additives commonly used in food • coding system used to describe food additives, colours and flavours • legal requirements relating to additives used as established by the Food Standards Code • typical quantities used and related units of measurement • preparation requirements, such as forming and breaking emulsions, and preparation of solutions • addition systems and related equipment requirements • Occupational Health and Safety (OHS)issues related to handling of additives • consequences of incorrect additive addition, including Food Standards Code as it relates to food additives used in a given product range • the quality and food safety hazards of incorrect addition • handling and processing conditions that affect the characteristics of colours and flavours
Underpinning Skills	Demonstrate the skill*:* • identify common food additives and group them by function • identify common types of additives used in the food industry • identify the functions of food additives commonly used in food, such as: ➢ texture modifying agents ➢ organoleptic and nutritional modifying agents, including flavours, colours, flavour enhancers, sugar-free sweeteners, minerals, vitamins and food acids ➢ shelf-life enhancing agents, including preservatives, anti-oxidants and food acids ➢ technological aids, including humectants, enzymes, propellants, flour treatment, caking agents and bleaching agents • identify additives, colours and flavours used in product range produced in the workplace, including:

	➢ coding system used to describe food additives, colours and flavours ➢ legal requirements relating to additives used as established by the Food Standards Code ➢ function in the food product ➢ typical quantities used and related units of measurement ➢ preparation requirements, and forming and breaking emulsions, and preparation of solutions where required ➢ addition systems and related equipment requirements ➢ health and safety issues related to handling of additives ➢ process recording requirements ➢ consequences of incorrect additive addition, including the Food Standards Code as it relates to food additives used in a given product range • review and/or establish procedures to describe storage, handling and processing conditions that affect the characteristics of colours and flavours, such as: ➢ changes in pH ➢ temperature change ➢ exposure to light ➢ exposure to humidity ➢ packaging materials • review and/or establish procedures to describe the method of preparation and addition of additives to food products produced in the workplace • provide examples of incorrect addition of food additives that could occur in the production process, determine appropriate corrective action within company policy and level of authority • use communication skills to interpret and complete work information to support operations of work team or area • demonstrate and support cooperative work practices within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Apply the Principles of Nutrition to Food Processing**
Unit Code	**IND COP4 13 0613**
Unit Descriptor	This unit covers the skills and knowledge required to provide nutritional information for processed food, and to implement procedures to optimize the nutritional value of a product.

Elements	Performance Criteria
1. Interpret labelling requirements to provide nutritional information	1.1 Food storage and preparation information on food labels are reviewed. 1.2 The nutritional values of similar processed food products based on information supplied on the label are compared. 1.3 Nutritional information on product labels to develop a diet plan for customers with specific requirements is interpreted.
2. Evaluate the impact of processing methods on the nutritive value of processed compared to fresh food	2.1 The effect of processing on the stability and availability of macro and micro nutrients in a range of food products is determined. 2.2 Processes for modification of ***Food processing Regulations/ Standards/ Guidelines*** to enhance nutritional value are investigated. 2.3 Food storage methods are compared for the retention of nutritive value and the introduction of food chemicals such as preservatives. 2.4 The nutritional impact of a range of additives for flavour or colouring enhancement is investigated. 2.5 Health warnings and permissible levels for the use of artificial additives to food products are compiled for a food product range.
3. Contribute to the development of a food product to meet a specified dietary requirement	3.1 Appropriate diets for customers with specific requirements or ***OHS*** challenges are identified. 3.2 Common nutritional deficiencies and related diseases are evaluated. 3.3 The nutritional properties of foods are matched to specified ***Work place requirements***. 3.4 A food product is developed and nutritional advice provided.

Variable	Range
Food processing Regulations/	May include: • Ethiopian and international standards

Standards/ Guidelines	• Codex Food Processing Standards • Federal and state legislation • NHMRC Ethiopian dietary guidelines • FSANZ labelling regulations
Occupational health and safety	May include: • Codes of practice • Material Safety Data Sheets • Enterprise OHS policies, procedures and programs.
Workplace requirements	May include: • Enterprise QA policy, practices and procedures • Enterprise-specific procedures • SOPs • Task requirements • Work instructions
Regulations	May include: • Ethiopian and international standards including: • industry guidelines and codes of practice • industry regulations • Ethiopia New Zealand Food Standards Code • ISO Standards • codex alimentary • State food regulations • Legislation
Organizations	May include: • National Health & Medical Research Council (NHMRC) • National Heart Foundation of Ethiopia (NHFA) • Federation of Ethiopian Nutrition Organisations (FANO) • Nutrition Ethiopia • The Nutrition Society of Ethiopia • Dietitians Association of Ethiopia • The Ethiopian Institute of Food Science & Technology • Ethiopian society of clinical immunology and allergy
Functional foods	May include: • Any fresh or processed food claimed to have a health-promoting or disease-preventing property beyond the basic function of supplying nutrients. Fermented foods with live cultures are considered as functional foods with probiotic benefits.
Nutraceuticals	May include: • Includes functional foods that also aid in the prevention and/or treatment of disease(s) and/or disorder(s) (except anaemia),
Modified foods	May include: • Fresh or processed food which has had components added (e.g. Vitamin C enriched) or reduced (e.g. low fat milk)

Evidence Guide	
Critical Aspects of Competency	Demonstrate knowledge and skills to: • Critical aspects of assessment must include evidence of the ability to compare the nutritive value of processed food products based on nutritional information, to assess the impact of food processing and preservation techniques on nutrient retention in the food product, and to apply knowledge of food properties and nutrition as part of contributing to product development or planning.
Underpinning Knowledge	Demonstrate knowledge of: • impacts of processing on nutritive properties of food • nutritional information on food label • product development processes • additives as nutritional enhancers • impacts of processing on nutritive properties of food • nutritional information on label • product development to reduce negative nutritional effects or meet nutritional deficiencies • additives as nutritional enhancers • key macro and micro nutrients for a healthy diet • the processes of digestion, absorption and energy metabolism in the human body • human energy requirements • dietary guidelines and legislative requirements related to processed foods • the effects of processing and storage on nutrients, and the methods for overcoming these effects • nutrition related risk factors and diseases • food intolerances and allergies • diseases caused by nutritional deficiencies • modified and functional foods and nutraceuticals
Underpinning Skills	Demonstrate skills in: • establish the processes of digestion and absorption • establish the process of energy metabolism in the human body • describe the role of proteins in nutrition • describe the role of carbohydrates in nutrition • describe the role of vitamins and minerals in nutrition • describe the role of dietary fibre • describe the role of lipids in nutrition • describe the body's processes for storing and using water and its role in nutrition • identify, review and apply key and current nutritional information • compare the nutritional needs of special population groups

	• evaluate nutritional issues in relation to product development, labelling and marketing of processed foods • identified nutritional related risk factors and diseases • establish public health and environmental hazards, in relation to nutrition
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Apply an Understanding of Food Additives**
Unit Code	**IND COP4 14 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to recognize the characteristics and functions of food additives, preservatives, colors and flavors used in food products.

Elements	Performance Criteria
1. Identify additives used in food	1.1. Types of food additives and common additives used in food products are identified. 1.2. Functions of food additives are identified. 1.3. Legal requirements relating to use of food additives are identified. 1.4. Legal and quality consequences of incorrect additive addition are identified.
2. Manage use of additives in a production process	2.1. Additives ***groups*** used in product range produced in the production process are identified. 2.2. Methods of addition are suited to food additive and production requirements. 2.3. ***Policies and procedures*** for safe handling and addition of food additives are reviewed and/or established. 2.4. Handling, use and disposal of additives are conducted in accordance with environmental standards.

Variable	Range
Groups	May include: • preservatives • anti-oxidants • acidulates • organoleptic and nutritional modification agents • colours and flavours, including synthetic and natural, oil and water soluble and lakes (dispersion in oil - applying to colours only) • technological aids
Policies and procedures	May include: • Handling of food additives, preservatives, colors and flavors and related work processes are consistent with company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements and takes account of OHS and environmental impact

Evidence Guide	
Critical Aspects of Competency	Demonstrate knowledge and skill to: • identify legal, company and quality standards for food additives • identify main additives and groupings • describe the function and user requirements for additives • Manage the use of additives to ensure product quality standards are achieved.
Underpinning Knowledge	Demonstrate Knowledge of: • types of food additives and common additives used in food products • the functions of food additives commonly used in food • coding system used to describe food additives, colours and flavours • legal requirements relating to additives used as established by the Food Standards Code • typical quantities used and related units of measurement • preparation requirements, such as forming and breaking emulsions, and preparation of solutions • addition systems and related equipment requirements • Occupational Health and Safety (OHS)issues related to handling of additives • consequences of incorrect additive addition, including Food Standards Code as it relates to food additives used in a given product range • the quality and food safety hazards of incorrect addition • handling and processing conditions that affect the characteristics of colours and flavours
Underpinning Skills	Demonstrate skill to • identify common food additives and group them by function • identify common types of additives used in the food industry • identify the functions of food additives commonly used in food, such as: ➢ texture modifying agents ➢ organoleptic and nutritional modifying agents, including flavours, colours, flavour enhancers, sugar-free sweeteners, minerals, vitamins and food acids ➢ shelf-life enhancing agents, including preservatives, anti-oxidants and food acids ➢ technological aids, including humectants, enzymes, propellants, flour treatment, caking agents and bleaching agents • identify additives, colours and flavours used in product range produced in the workplace, including:

	➢ coding system used to describe food additives, colours and flavours ➢ legal requirements relating to additives used as established by the Food Standards Code ➢ function in the food product ➢ typical quantities used and related units of measurement ➢ preparation requirements, and forming and breaking emulsions, and preparation of solutions where required ➢ addition systems and related equipment requirements ➢ health and safety issues related to handling of additives ➢ process recording requirements ➢ consequences of incorrect additive addition, including the Food Standards Code as it relates to food additives used in a given product range • review and/or establish procedures to describe storage, handling and processing conditions that affect the characteristics of colours and flavours, such as: ➢ changes in pH ➢ temperature change ➢ exposure to light ➢ exposure to humidity ➢ packaging materials • review and/or establish procedures to describe the method of preparation and addition of additives to food products produced in the workplace • provide examples of incorrect addition of food additives that could occur in the production process, determine appropriate corrective action within company policy and level of authority • use communication skills to interpret and complete work information to support operations of work team or area • demonstrate and support cooperative work practices within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Supervise and Maintain a Food Safety Plan**
Unit Code	**IND COP4 15 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to maintain and implement a hazard analysis critical control point (HACCP)-based food safety plan. It includes the ability to monitor the implementation of a food safety plan, to revise, verify and validate the system, and to respond to audit findings for the system.

Elements	Performance Criteria
1. Review the existing food safety plan	1.1 Data and results from HACCP records are collected to ***Verification of a food safety system***. 1.2 Major and minor non-conformances to the HACCP plan are identified. 1.3 Critical control points are monitored to confirm performance. 1.4 Problem areas are analyzed using appropriate quality improvement tools and techniques. 1.5 Corrective actions and strategies are suggested to prevent recurrence of the problem. 1.6 Required amendments to the HACCP plan are documented. 1.7 Recommendations are reported and presented to appropriate personnel.
2. Communicate the requirements of the food safety plan	2.1 ***Food safety program***, principles, food safety procedures and requirements, including regulatory requirements, are explained to the team. 2.2 Commitment to, and responsibility for, food safety is developed through work team communication. 2.3 Procedures to support the food safety plan are defined, documented and put in place. 2.4 Training and mentoring is provided to the team to assist implementation
3. Monitor the implementation of the food safety plan	3.1 Team implementation of the food safety plan is ***monitored***. 3.2 Personal behavior, including ***hygiene***, housekeeping and use of clothing and equipment, is monitored and corrected, where necessary. 3.3 ***Record keeping*** and reports are completed accurately and on schedule.

	3.4 Prompt action is taken to correct non-conformance according to enterprise and regulatory requirements. 3.5 Causes of non-conformance are identified and analyzed. 3.6 ***Control measures*** are implemented to prevent future non-conformance. 3.7 ***Non-conformance*** is reported according to enterprise requirements.
4. Maintain the food safety plan	4.1 Feedback is sought from all personnel to identify potential hazards, corrective actions and controls. 4.2 Processes or conditions which could result in ***breaches of food safety procedures*** are identified and preventive or corrective action is taken. 4.3 Corrective action and control procedures are updated to improve food safety. 4.4 Documentation is completed according to enterprise and regulatory requirements.

Variable	**Range**
Verification of a food safety system	May include: • Verification refers to methods and procedures used to carry out monitoring, including: • sampling and testing to provide evidence that the specifications set by food safety legislation and enterprise requirements continue to be met
Food safety program	May include: • A food safety program is a written document that specifies the systematic identification of hazard points, in the production, processing and sale of food and the implementation of risk avoidance, risk minimization and risk management strategies in respect of these identified hazards.' • (National Food Authority 1994, p17). • The food safety program and related procedures must comply with legal requirements of the Food Safety Standards and must be communicated to all food handlers. Where no food safety program is in place, food safety requirements may be specified in general operating procedures
Monitoring	describes the methods used to confirm that a food safety or quality hazard is in control. Examples of monitoring procedures include: • taking temperatures • collecting samples • conducting visual inspections and testing, as required

Hygiene	May include: • Minimum personal hygiene requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in the Food Safety Standard 3.2.2, Division 4:14 and/or state/territory legislation/regulations
Record keeping	May include: • Record keeping complies with customer, legal and food safety program requirements
Control measures	May include: • Control points include: • critical, quality and regulatory control points
Non-compliance	May include: • Responsibility for identifying non-compliance against quality standards: • occurs within the context of defined standards or specifications and relates to work area
Breaches of food safety procedures	May include: • Responsibility for identifying breaches of food safety procedures and taking corrective action: • occurs in the context of the food safety program and within scope of responsibility
Incidents	May include: • A food safety incident: • is a situation where the safe limits or parameters identified by the food safety program are not met • A quality incident: • is a situation where the quality limits or parameters identified in specifications or processing instructions are not met
Workplace information	May include: • food safety and quality policies and programs • Standard Operating Procedures (SOPs) • specifications • log sheets • written or verbal instruction incorporating food safety and quality requirements
Reporting of health conditions and illnesses	May include: • Reporting of health conditions and illnesses requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in Food Safety Standard 3.2.2, Division 4:13 and/or state/territory legislation/regulations
Operator responsibilities	May include: • The operator at this level may have direct responsibility for overseeing the training/development of team members. • The operator at this level may have some responsibility for

	independently assessing risks and determining the effectiveness of control measures. They would be expected to observe day-to-day effectiveness of the food safety plan and participate in assessment and review processes. Responsibilities at this level may include facilitating consultation processes

Evidence Guide	
Critical Aspects of Competency	Critical aspects of assessment must include the following: • review a food safety plan for a food processing operation • communicate the requirements of a food safety plan to workers • demonstrate safe food handling work practices • complete records and reports related to the implementation of food safety • Respond to non-compliances and take corrective action.
Underpinning Knowledge	Demonstrate Knowledge of: • current technical and process knowledge required to participate in investigations of food safety/quality hazards, risks and incidents • common microbiological, physical and chemical hazards to food safety, and related control methods • the way changes in equipment and/or processing methods can affect food safety hazards and level of risk • the objectives of a HACCP-based food safety system • the steps in the development of a HACCP-based food safety system • the steps in the systematic introduction of a HACCP-based food safety system • enterprise recall and traceability procedures • purpose of the HACCP development and review process • the document controls associated with a procedure change • the purpose of SOPs and work instructions • the process of auditing and verifying a HACCP-based food safety system
Underpinning Skills	Demonstrate skills to: • collect, monitor and interpret data to identify trends and non-conformance • communicate with a range of stakeholders, including customers, to convey food safety requirements and programs • demonstrate current technical and process knowledge for the control of hazards and improvement of the food safety system • demonstrate enterprise monitoring procedures, including sampling, testing and required records and documents, and explain their purpose

	• determine and take corrective action where food safety is potentially compromised • communicate food safety requirements to the team • facilitate food safety risk assessment procedures • apply HACCP principles in leading the process for developing a food safety plan • communicate the regulatory requirements that apply to the enterprise's food safety plan • develop enterprise Standard Operating Procedures (SOPs) and communicate their role in the food safety system • review operations and practices for food safety improvement • lead personnel/team in investigation of food safety incidents and potential incidents • maintain currency of knowledge through independent research or professional development • monitor records and documentation for accuracy and conformance • respond to food safety incidents and implement food recall procedures, as required • review communication systems (spoken and written) to minimise the potential for misreporting and misunderstanding of food safety requirements, procedures and plans • take action to improve own work practice as a result of self-evaluation, feedback from others or in response to changed work practices or technology • use a range of communication and team building strategies to gain team commitment to food safety • use detailed product knowledge, including product characteristics and the requirements for safe preparation, processing, storage, handling and display, to monitor food safety • utilise problem-solving strategies required in investigating non-conformance and reviewing the food safety system • model safe food handling and quality practices and procedures to demonstrate required work practices and provide leadership, including demonstrating: ➢ work procedures that meet the requirements of quality and food safety ➢ cleaning and sanitising equipment ➢ sampling and testing, as appropriate, according to quality and food safety requirements ➢ maintaining personal hygiene ➢ wearing appropriate clothing and footwear as required by the work task

	➢ following procedures when moving within and between work areas ➢ reporting health conditions and illnesses according to workplace procedures ➢ handling, cleaning and storing equipment, utensils and packaging materials, as appropriate
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Optimize a Work Process**
Unit Code	**IND COP4 16 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to assess, investigate and make recommendations to optimize the performance of a work process, system or area.

Elements	Performance Criteria
1. Identify work process scope	1.1. The scope and flow of the work process are identified. 1.2. ***Work process information*** is identified and collected.
2. Assess work process performance	2.1. Work process performance is assessed against plan and benchmark information. 2.2. Variations in work process performance are identified and investigated. 2.3. Opportunities are identified for improvement.
3. Develop a plan to optimize process performance	3.1. Recommendations for improvements are developed and reported in the appropriate format. 3.2. An implementation plan is developed and presented in the appropriate format.
4. Implement, monitor and evaluate process improvement	4.1. Workplace documentation is reviewed to reflect process improvement. 4.2. Changes to roles and responsibilities of workplace personnel involved in implementing the ***process optimization*** plan are identified and communicated. 4.3. Resources to support implementation are identified, negotiated and secured. 4.4. Process changes are implemented and monitored. 4.5. Continuous improvement procedures are applied to evaluate and refine process optimization.

Variable	Range
Work process information	May include: • Work process information includes but is not limited to: • historical data on performance of process and equipment • costs • raw materials/ingredient grades and suppliers • packaging components/consumables type and suppliers • energy efficiency • labour efficiency

	• resource/service costs • throughput times • changeover times
Process optimization	May include: • removing unnecessary process steps • improving communication • changing raw materials/ingredients and/or packaging components/consumables grades/types • changing work practices and/or equipment • changing labour allocation/skill composition
Policies and procedures	May include: • Changes introduced through process optimization are consistent with company policies and procedures, regulatory and licensing requirements, legislative requirements, workplace environmental guidelines, and industrial awards and agreements and takes account of Occupational Health and Safety (OHS) and environmental impact of scheduling arrangements

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • establish parameters of work process • analyse performance measures and identify opportunities for improvement • develop plan to optimise work process • appropriately engage other personnel in plan implementation • monitor implementation and analyse outcomes • Engage continuous improvement processes to sustain and improve outcomes.
Underpinning Knowledge	Demonstrate Knowledge of: • process/workflow mapping purpose and techniques • characteristics of the work process, including typical factors that affect process performance, such as: fluctuations in demand/throughput quality of raw material/ingredient inputs human resources availability/competencies equipment configuration, capacity and performance process capability changeover times cost of services • criteria against which to assess performance, such as Key Performance Indicators (KPIs), production plans/schedules, budgets and relevant benchmark information • technical knowledge to identify and assess current performance and identify improvement opportunities and proposals

	• process improvement tools and techniques • related workplace documentation and systems • relevant personnel and departments to be consulted/notified of optimisation implementation plan • recording systems and requirements
Underpinning Skills	• define the purpose and scope of the work process and develop a process map/workflow diagram, including information on the steps in the process under examination and the interaction of the process with related customers and suppliers • identify steps in the process or conditions that result in workflow blockages or sub-optimal performance (this is typically undertaken in consultation with process operators) • use workplace data to develop/confirm process performance information, such as historical information on process and equipment performance (where processes are seasonal, it should include reference to similar points in the cycle for comparative purposes) • identify criteria against which to assess process performance, such as performance plans/targets, equipment operating capacity, process capability and relevant benchmark information as appropriate/available • assess process performance information against agreed criteria • identify sub-optimal performance events and/or patterns and investigate causes, such as facilitation of an investigation team • identify opportunities to remove or minimise causes of sub-optimal process performance • evaluate opportunities and assess related costs/benefits for each option • recommend preferred options and report recommendations in the required workplace format • develop an implementation plan, including identifying resource requirements, personnel affected and appropriate communication strategy, revised/new workplace documentation and evaluation/review process • negotiate and secure resources to support implementation • communicate proposals/implementation plan, invite feedback and take feedback into account • follow continuous process procedures and monitor and review changes against improvement criteria • trial changes prior to full implementation • arrange training/development opportunities • use communication skills to interpret and complete work information to support operations of work team or area, facilitate consultation processes and report, record and present information in the required formats

	• demonstrate and support cooperative work practices within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Schedule and Manage Production**
Unit Code	**IND COP4 17 0613**
Unit Descriptor	This unit of competency covers the skills and knowledge required to plan, monitor and adjust schedules to meet operational requirements.

Elements	Performance Criteria
1. Identify production requirements	1.1. Forecast and sales information is used to identify production requirements. 1.2. Production priorities are identified to satisfy demand.
2. Identify resource requirements to meet production requirements	2.1. Stock levels of raw materials/ingredients, packaging components and consumables are confirmed against production requirements. 2.2. Equipment capacity and status and human resources are confirmed against production requirements.
3. Develop and communicate the production schedule	3.1. The production schedule is developed to meet demand and delivery timelines within production capacity and budget. 3.2. The production schedule takes account of stock levels, storage capacity, equipment capacity and product mix to minimize stock and product holdings and maximize production efficiency. 3.3. The production schedule is recorded in the appropriate workplace format according to ***policies and procedures***. 3.4. The production schedule is made available to relevant personnel in a timely manner.
4. Monitor actual against scheduled production	4.1. Production is monitored to identify actual and potential barriers to achieving the schedule. 4.2. Resource usage rates are monitored to identify potential shortages. 4.3. Unplanned events that could affect the schedule are identified, assessed and addressed.
5. Adjust production schedules	5.1. Production ***schedules*** are adjusted to take account of changed conditions. 5.2. Changes to the production schedule are negotiated and communicated to relevant personnel in a timely manner. 5.3. Resource implications of amended schedules are identified and resources are accessed to meet requirements.

	5.4. Potential failure to meet delivery deadlines are identified and communicated to relevant personnel in a timely manner. 5.5. Schedule documentation is amended as required to meet workplace reporting requirements.
6. Review production schedule development process	6.1. The production scheduling process is reviewed to identify opportunities for improvement. 6.2. Variances in production against schedule are identified, investigated and reported. 6.3. Personnel responsible for implementing the schedule are consulted to identify improvement opportunities. 6.4. The scheduling process is revised to reflect improvements.

Variable	**Range**
Policies and procedures	Production scheduling is consistent with company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements and takes account of Occupational Health and Safety (OHS) and environmental impact of scheduling arrangements
Schedules	May include: • the use of planning and systems control software, such as SAP and MRPII • customer orders and/or market forecasts

Evidence Guide	
Critical Aspects of Competency	Evidence of ability to: • confirm production requirements and resource implications • establish and document production schedule • coordinate implementation of schedule • ensure production schedule is communicated and reported to all appropriate personnel • manage unplanned production issues • Assess production outcomes against schedule and make required adjustments.
Underpinning Knowledge	Demonstrate Knowledge of: • the role and scope of the scheduling function, including flow of information to and from the scheduling process and the impact of scheduling for related planning, purchasing, production and despatch processes • factors to be taken into account in planning the schedule, including the inter-relationships between factors, such as: ➢ customer requirements ➢ stock levels and supply options ➢ use-by codes

	➢ production capacity and availability ➢ labour requirements and availability ➢ product compatibility ➢ capacity of related processes and/or storage facilities ➢ transport capacity • consequences of failing to meet delivery timelines(this may differ according to customers and may include stock-out fines in addition to damage to customer relationships) • the company's preferred approach to managing customer relations • the characteristics of raw materials/ingredients, packaging components and consumables and production process to determine the most efficient plan to meet production requirements, including stock shelf-life, product compatibility (with the exception of dedicated product lines) and changeover procedures • equipment capacity to ensure that production quantities and timelines are achievable • methods used to monitor actual to planned production, such as use of systems software and key performance indicators (KPIs) where these are collected on a real time basis • relevant personnel and departments to be consulted/notified of production schedule and related amendments, including the information relevant to each group/person • awareness of conditions that can affect achievement of schedule, including conditions that are unusual or unplanned and related options for response • options for maximising resource utilisation and minimising waste, including options for alternate resource allocation in response to unplanned events • recording systems and requirements • process improvement procedures • supplier capacity and timeframes where relevant • competencies required by the work process and competencies held by the work team where relevant
Underpinning Skills	• collect and interpret sales and/or market forecast information, such as liaising with sales departments/functions and/or direct contact with customers • Identify production priorities to meet customer/market expectations • Identify and confirm resource requirements to meet the schedule, such as stock levels, equipment availability and capacity, personnel, storage capacity, and transport, and where required, identify alternate sources of supply for resources in short supply

	• develop a schedule to match production priorities to available resources, such as consulting relevant personnel to confirm schedule feasibility, and notifying relevant personnel of any possibility that demand cannot be met within required timeframe • record and communicate the schedule in appropriate formats, such as use of software and communicating information to meet workplace and audience requirements • monitor actual production and materials usage levels against production plan to identify variances and take appropriate corrective action, including assessing the consequences of any adjustments to the schedule for the customer, the company and resource availability • adjust the schedule in response to typical and atypical variables affecting achievement of schedule • respond to unplanned events to minimise disruption and optimise efficiency • confirm that resources and personnel are available to meet amended schedule and, if not, take action to secure requirements • communicate schedule changes to affected personnel • track and investigate variance to identify cause • follow review procedures to identify opportunities to improve scheduling process • follow procedures to adopt and communicate improvements to the scheduling process • use planning and systems control software according to enterprise procedures • match work allocation to competencies available in the work team according to enterprise procedures • use communication skills to interpret and complete work information to support operations of work team or area • use communication skills to consult and communicate with relevant personnel • demonstrate and support cooperative work practices within a culturally diverse workforce
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Plan and Organize Work**
Unit Code	**IND COP4 18 0613**
Unit Descriptor	This unit covers the knowledge, skills and attitude required in planning and organizing work activities in a production application. It may be applied to a small independent operation or to a section of a large organization.

Elements	Performance Criteria
1. Set objectives	1.1 ***Objectives*** are planned consistent with and linked to work activities in accordance with organizational aims. 1.2 Objectives are stated as measurable targets with clear time frames. 1.3 Support and commitment of team members are reflected in the objectives. 1.4 Realistic and attainable objectives are identified.
2. Plan and schedule work activities	2.1 Tasks/work activities to be completed are identified and prioritized as directed. 2.2 Tasks/work activities are broken down into steps in accordance with set time frames and achievable components. 2.3 Task/work activities are assigned to appropriate team or individuals in accordance with agreed functions. 2.4 ***Resources*** are allocated as per requirements of the activity. 2.5 ***Schedule of work activities*** is coordinated with personnel concerned.
3. Implement work plans	3.1 ***Work methods and practices*** are identified in consultation with personnel concerned. 3.2 ***Work plans*** are implemented in accordance with set time frames, resources and ***standards.***
4. Monitor work activities	4.1 Work activities are monitored and compared with set objectives. 4.2 Work performance is monitored. 4.3 Deviations from work activities are reported and recommendations are coordinated with appropriate personnel and in accordance with set standards. 4.4 Reporting requirements are complied with in accordance with recommended format. 4.5 Timeliness of report is observed. 4.6 Files are established and maintained in accordance with standard operating procedures.

Variable	Range
Objectives	May include: • Specific • General
Resources	May include: • Personnel • Equipment and technology • Services • Supplies and materials • Sources for accessing specialist advice • Budget
Schedule of work activities	May include: • Daily • Work-based • Contractual Regular
Work methods and practices	May include: • Legislated regulations and codes of practice • Industry regulations and codes of practice • Occupational health and safety practices
Work plans	May include: • Daily work plans • Project plans • Program plans • Resource plans • Skills development plans • Management strategies and objectives
Standards	May include: • Performance targets • Performance management and evaluation systems • Occupational standards • Employment contracts • Client contracts • Discipline procedures • Workplace assessment guidelines • Internal quality assurance • Internal and external accountability and auditing requirements • Training Regulation Standards • Safety Standards
Appropriate personnel/ authorities	include: • Management • Line Staff

Feedback mechanisms	May include: • Verbal feedback • Informal feedback • Formal feedback • Questionnaire • Survey • Group discussion

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • set objectives • plan and schedule work activities • implement work plans • monitor work activities • review and evaluate work plans and activities
Underpinning Knowledge	Demonstrates knowledge of: • organization's strategic plan, policies rules and regulations, laws and objectives for work unit activities and priorities • organizations policies, strategic plans, guidelines related to the role of the work unit • team work and consultation strategies
Underpinning Skills	Demonstrates skill to: • plan • lead • organize • coordinate • communicate • inter-and intra-person/motivation skills • present
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Migrate to New Technology**
Unit Code	**IND COP4 19 0613**
Unit Descriptor	This unit defines the competence required to apply skills and knowledge in using new or upgraded technology. The rationale behind this unit emphasizes the importance of constantly reviewing work processes, skills and techniques in order to ensure that the quality of the entire business process is maintained at the highest level possible through the appropriate application of new technology. To this end, the person is typically engaged in on-going review and research in order to discover and apply new technology or techniques to improve aspects of the organization's activities.

Elements	Performance Criteria
1. Apply existing knowledge and techniques to technology and transfer	1.1 Situations are identified where existing knowledge can be used as the basis for developing new skills. 1.2 New or upgraded technology skills are acquired and used to enhance learning. 1.3 New or upgraded equipment are identified, classified and used where appropriate, for the benefit of the organization.
2. Apply functions of technology to assist in solving organizational problems	2.1 Testing of new or upgraded equipment is conducted according to the specification manual. 2.2 Features of new or upgraded equipment are applied within the organization 2.3 Features and functions of new or upgraded equipment are used for solving organizational problems 2.4 Sources of information relating to new or upgraded equipment are accessed and used
3. Evaluate new or upgraded technology performance	3.1 New or upgraded equipment is evaluated for performance, usability and against OHS standards**.** 3.2 ***Environmental considerations*** are determined from new or upgraded equipment. 3.3 ***Feedback*** is sought from users where appropriate.

Variable	Range
Environmental Considerations	May include: • recycling, safe disposal of packaging (e.g. cardboard, polystyrene, paper, plastic) and correct disposal of waste materials by an authorized body

Feedback	May include: • surveys, • questionnaires, • Interviews and meetings.

Evidence Guide	
Critical Aspects of Competency	Competence must confirm the ability to transfer the application of existing skills and knowledge to new technology
Underpinning Knowledge	Demonstrate knowledge of: • Broad awareness of current technology trends and directions in the industry (e.g. systems/procedures, services, new developments, new protocols) • Vendor product directions • Ability to locate appropriate sources of information regarding metal manufacturing and new technologies • Current industry products/services, procedures and techniques with knowledge of general features • Information gathering techniques
Underpinning Skills	Demonstrate skills of: • Research skills for identifying broad features of new technologies • Ability to assist in the decision making process • Literacy skills in regard to interpretation of technical manuals • Ability to solve known problems in a variety of situations and locations • Evaluate and apply new technology to assist in solving organizational problems • General analytical skills in relation to known problems
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Establish Quality Standards**
Unit Code	**IND COP4 20 0613**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to establish quality specifications for work outcomes and work performance. It includes monitoring and participation in maintaining and improving quality, identifying critical control points in the production of quality output and assisting in planning and implementing of quality assurance procedures.

Elements	Performance Criteria
1. Establish quality specifications for product	1.1 Market specifications are ***sourced*** and ***legislated requirements*** identified. 1.2 Quality specifications are developed and agreed upon 1.3 Quality specifications are documented and introduced to organization staff / personnel in accordance with the organization policy 1.4 Quality specifications are updated when necessary
2. Identify hazards and critical control points	2.1. Critical control points impacting on quality are identified. 2.2. Degree of risk for each hazard is determined. 2.3. Necessary documentation is accomplished in accordance with organization quality procedures
3. Assist in planning of quality assurance procedures	3.1 Procedures for each identified control point are developed to ensure optimum quality. 3.2 Hazards and risks are minimized through application of appropriate controls. 3.3 Processes are developed to monitor the effectiveness of quality assurance procedures.
4. Implement quality assurance procedures	4.1 Responsibilities for carrying out procedures are allocated to staff and contractors. 4.2 Instructions are prepared in accordance with the enterprise's quality assurance program. 4.3 Staff and contractors are given induction training on the quality assurance policy. 4.4 Staff and contractors are given in-service training relevant to their allocated ***safety procedures***.
5. Monitor quality of work outcome	5.1 Quality requirements are identified 5.2 Inputs are inspected to confirm capability to meet quality requirements

	5.3 Work is conducted to produce required outcomes 5.4 Work processes are monitored to confirm quality of output and/or service 5.5 Processes are adjusted to maintain outputs within specification.
6. Participate in maintaining and improving quality at work	6.1 Work area, materials, processes and product are routinely monitored to ensure compliance with quality requirements 6.2 Non-conformance in inputs, process, product and/or service is identified and reported according to workplace reporting requirements 6.3 Corrective action is taken within level of responsibility, to maintain quality standards 6.4 Quality issues are raised with designated personnel
7. Report problems that affect quality	7.1 Potential or existing quality problems are recognized. 7.2 Instances of variation in quality are identified from specifications or work instructions. 7.3 Variation and potential problems are reported to supervisor/manager according to enterprise guidelines.

Variable	**Range**
Sourced	May include: • End-users • Customers or stakeholders
Legislated requirements	Verification of product quality as part of consumer legislation or specific legislation related to product content or composition.
Safety procedures.	May include: • Use of tools and equipment for fabrication/production/ manufacturing works • Workplace environment and handling of material safety, • Following occupational health and safety procedures designated for the task • Respect the policies, regulations, legislations, rule and procedures for manufacturing/production/fabrication works

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Monitor quality of work • Establish quality specifications for product • Participate in maintaining and improving quality at work • Identify hazards and critical control points in the production of quality product

	• Assist in planning of quality assurance procedures • Report problems that affect quality • Implement quality assurance procedures
Underpinning Knowledge	Demonstrates knowledge of: • work and product quality specifications • quality policies and procedures • improving quality at work • hazards and critical points of operation • obtaining and using information • applying federal and regional legislation within day-today work activities • accessing and using management systems to keep and maintain accurate records • requirements for correct preparation and operation • technical writing
Underpinning Skills	Demonstrates skills to: • monitor quality of work • establish quality specifications for product • participate in maintaining and improving quality at work • identify hazards and critical control points in the production of quality product • assist in planning of quality assurance procedures • report problems that affect quality • implement quality assurance procedures
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Develop Individuals and Team**
Unit Code	**IND COP4 21 0613**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to determine individual and team development needs and facilitate the development of the workgroup.

Elements	Performance Criteria
1. Provide team leadership	1.1 ***Learning and development needs*** are systematically identified and implemented in line with ***organizational requirements***. 1.2 Learning plan to meet individual and group training and developmental needs is collaboratively developed and implemented. 1.3 Individuals are encouraged to self-evaluate performance and identify areas for improvement. 1.4 ***Feedback on performance*** of team members is collected from relevant sources and compared with established team learning process.
2. Foster individual and organizational growth	2.1 Learning and development program goals and objectives are identified to match the specific knowledge and skills requirements of competence standards. 2.2 ***Learning delivery methods*** are made appropriate to the learning goals, the learning style of participants and availability of equipment and resources. 2.3 Workplace learning opportunities and coaching/ mentoring assistance are provided to facilitate individual and team achievement of competencies. 2.4 Resources and timelines required for learning activities are identified and approved in accordance with organizational requirements.
3. Monitor and evaluate workplace learning	3.1 Feedback from individuals or teams is used to identify and implement improvements in future learning arrangements. 3.2 Outcomes and performance of individuals/teams are assessed and recorded to determine the effectiveness of development programs and the extent of additional support. 3.3 Modifications to learning plans are negotiated to improve the efficiency and effectiveness of learning. 3.4 Records and reports of competence are maintained within organizational requirement.

4. Develop team commitment and cooperation	4.1 Open communication processes to obtain and share information is used by team. 4.2 Decisions are reached by the team in accordance with its agreed roles and responsibilities. 4.3 Mutual concern and camaraderie are developed in the team.
5. Facilitate accomplishment of organizational goals	5.1 Team members are actively participated in team activities and communication processes. 5.2 Individual and joint responsibility is developed by teams members for their actions. 5.3 Collaborative efforts are sustained to attain organizational goals.

Variable	**Range**
Learning and development needs	May include: • Coaching, monitoring and/or supervision • Formal/informal learning program • Internal/external training provision • Work experience/exchange/opportunities • Personal study • Career planning/development • Performance evaluation • Workplace skills assessment • Recognition of prior learning
Organizational requirements	May include: • Quality assurance and/or procedures manuals • Goals, objectives, plans, systems and processes • Legal and organizational policy/guidelines and requirements • Safety policies, procedures and programs • Confidentiality and security requirements • Business and performance plans • Ethical standards • Quality and continuous improvement processes and standards
Feedback on performance	May include: • Formal/informal performance evaluation • Obtaining feedback from supervisors and colleagues • Obtaining feedback from clients • Personal and reflective behavior strategies • Routine and organizational methods for monitoring service delivery
Learning delivery methods	May include: • On the job coaching or monitoring • Problem solving • Presentation/demonstration

	• Formal course participation • Work experience and involvement in professional networks • Conference and seminar attendance

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • identify and implement learning opportunities for others • give and receive feedback constructively • facilitate participation of individuals in the work of the team • negotiate plans to improve the effectiveness of learning • prepare learning plans to match skill needs • access and designate learning opportunities
Underpinning Knowledge	Demonstrates knowledge of: • coaching and monitoring principles • how to work effectively with team members who have diverse work styles, aspirations, cultures and perspective • how to facilitate team development and improvement • methods and techniques to obtain and interpreting feedback • methods for identifying and prioritizing personal development opportunities and options • career paths and competence standards in the industry
Underpinning Skills	Demonstrates skills to: • read and understand a variety of texts, preparing general information and documents according to target audience; spell with accuracy; use grammar and punctuation effective relationships and conflict management • communicate including receiving feedback and reporting, maintaining effective relationships and conflict management • plan and organize required resources and equipment to meet learning needs • coach and mentor skills to provide support to colleagues • report to organize information; assess information for relevance and accuracy; identify and elaborate on learning outcomes • facilitate and conduct small group training sessions • relate to people from a range of social, cultural, physical and mental backgrounds
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Utilize Specialized Communication Skills**
Unit Code	**IND COP4 22 0613**
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use specialized communication skills to meet specific needs of internal and external clients, conduct interviews, facilitate group discussions, and contribute to the development of communication strategies.

Elements	Performance Criteria
1. Meet common and specific communication needs of clients and colleagues	1.1 Specific communication needs of clients and colleagues are identified and met. 1.2 Different approaches are used to meet communication needs of clients and colleagues. 1.3 Conflict is addressed promptly and in a timely way and in a manner which does not compromise the standing of the organization.
2. Contribute to the development of communication strategies	2.1 ***Strategies*** for internal and external dissemination of information are developed, promoted, implemented and reviewed as required. 2.2 Channels of communication are established and reviewed regularly. 2.3 Coaching in effective communication is provided. 2.4 Work related network and relationship are maintained as necessary. 2.5 Negotiation and conflict resolution strategies are used where required. 2.6 Communication with clients and colleagues is appropriate to individual needs and organizational objectives.
3. Represent the organization	3.1 When participating in internal or external fora, presentation is relevant, appropriately researched and presented in a manner to promote the organization. 3.2 Presentation is made clear and sequential and delivered within a predetermined time. 3.3 Appropriate media is utilized to enhance presentation. 3.4 Differences in views are respected. 3.5 Written communication is made consistent with organizational standards. 3.6 Inquiries are responded in a manner consistent with organizational standard.

4. Facilitate group discussion	4.1 Mechanisms which enhance ***effective group interaction*** are defined and implemented. 4.2 Strategies which encourage all group members to participate are used routinely. 4.3 Objectives and agenda are routinely set and followed for meetings and discussions. 4.4 Relevant information are provided to group to facilitate outcomes. 4.5 Evaluation of group communication strategies is undertaken to promote participation of all parties. 4.6 Specific communication needs of individuals are identified and addressed.
5. Conduct interview	5.1 A range of appropriate communication strategies are employed in ***interview situations***. 5.2 Different ***types of interview*** are conducted in accordance with the organizational procedures. 5.3 Records of interviews are made and maintained in accordance with organizational procedures. 5.4 Effective questioning, listening and nonverbal communication techniques are used to ensure that required message is communicated.

Variable	**Range**
Strategies	May include: • Recognizing own limitations • Utilizing techniques and aids • Providing written drafts • Verbal and non-verbal communication
Effective group interaction	May include: • Identifying and evaluating what is occurring within an interaction in a non-judgmental way • Using active listening • Making decision about appropriate words, behavior • Putting together response which is culturally appropriate • Expressing an individual perspective • Expressing own philosophy, ideology and background and exploring impact with relevance to communication
Interview situations	May include: • Establish rapport • obtain facts and information • Facilitate resolution of issues • Develop action plans and Diffuse potentially difficult situation

Types of Interview	May include: • Related to staff issues • Routine • Confidential • Evidential • Non-disclosure • Disclosure

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: • Demonstrate effective communication skills with clients and work colleagues accessing service • Adopt relevant communication techniques and strategies to meet client particular needs and difficulties
Underpinning Knowledge	Demonstrates knowledge of: • communication process • dynamics of groups and different styles of group leadership • communication skills relevant to client groups
Underpinning Skills	Demonstrates skills of: • full range of communication techniques including: ➢ active listening ➢ feedback ➢ interpretation ➢ role boundaries setting ➢ negotiation ➢ establishing empathy ➢ communication strategies • communicate to fulfill job roles as specified by the organization
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Manage and Maintain Small/Medium Business Operations**
Unit Code	**IND COP4 23 0613**
Unit Descriptor	This unit covers the operation of day-to-day business activities in a micro or small business. The strategies involve developing, monitoring and managing work activities and financial information, developing effective work habits, and adjusting work schedules as needed.

Elements	Performance Criteria
1. Identify daily work requirements	1.1 Work requirements are identified for a given time period by taking into consideration ***resources*** and constraints. 1.2 Work activities are prioritized based on business needs, requirements and deadlines. 1.3 If appropriate, work is allocated to relevant staff or contractors to optimize efficiency.
2. Monitor and manage work	2.1 People, resources and/or equipment are coordinated to provide optimum results. 2.2 Staff, clients and/or contractors are communicated within a clear and regular manner, to monitor work in relation to ***business goals*** or timelines. 2.3 ***Problem solving techniques*** are applied to work situations to overcome difficulties and achieve positive outcomes.
3. Develop effective work habits	3.1 Work and personal priorities are identified and a balance is achieved between competing priorities using appropriate ***time management strategies***. 3.2 Input from ***internal and external sources*** is sought and used to develop and refine new ideas and approaches. 3.3 Business or inquiries is/are responded to promptly and effectively. 3.4 Information is presented in a format appropriate to the industry and audience.
4. Interpret financial information	4.1 Relevant documents and reports are identified. 4.2 Documents and reports are read and understood and any implications discussed with appropriate persons. 4.3 Data and numerical calculations are analyzed, checked, evaluated, organized and reconciled. 4.4 Daily financial records and cash flow are maintained correctly and in accordance with legal and accounting requirements.

	4.5 Invoices and payments are prepared and distributed in a timely manner and in accordance with legal requirements. 4.6 Outstanding accounts are collected or followed-up on.
5. Evaluate work performance	5.1 Opportunities for improvements are monitored according to business demands. 5.2 Work schedules are adjusted to incorporate necessary modifications to existing work and routines or changing needs and requirements. 5.3 Proposed changes are clearly communicated and recorded to aid in future planning and evaluation. 5.4 Relevant codes of practice are used to guide an ethical approach to workplace practices and decisions.

Variable	**Range**
Resources	May include but is not limited to: • staff • money • time • equipment • space
Business goals	• sales targets • budgetary targets • team and individual goals • production targets • reporting deadlines
Problem solving techniques	May include but is not limited to: • gaining additional research and information to make better informed decisions • looking for patterns • considering related problems or those from the past and how they were handled • eliminating possibilities • identifying and attempting sub-tasks • collaborating and asking for advice or help from additional sources
Time management strategies	May include but is not limited to: • prioritizing and anticipating • short term and long term planning and scheduling • creating a positive and organized work environment • clear timelines and goal setting that is regularly reviewed and adjusted as necessary • breaking large tasks into smaller tasks • getting additional support if identified and necessary

Internal and external sources	May include but is not limited to: • staff and colleagues • management, supervisors, advisors or head office • relevant professionals such as lawyers, accountants, management consultants • professional associations

Evidence Guide	
Critical Aspects of Competency	A person must be able to demonstrate: • ability to identify daily work requirements and allocate work appropriately • ability to interpret financial documents in accordance with legal requirements
Underpinning Knowledge	Demonstrate knowledge of: • Federal and Local Government legislative requirements affecting business operations, especially in regard to Occupational Health and Safety (OHS), equal employment opportunity, industrial relations and anti-discrimination • technical or specialist skills relevant to the business operation • relevant industry code of practice • planning techniques to establish realistic timelines and priorities • identification of relevant performance measures • quality assurance principles and methods • relevant marketing, management, sales and financial concepts • methods for monitoring performance and implementing improvements • structured approaches to problem solving, idea management and time management
Underpinning Skills	Demonstrate skills to: • interpret legal requirements, company policies and procedures and immediate, day-to-day demands • communicate using questioning, clarifying, reporting, and giving and receiving constructive feedback • numeracy skills for performance information, setting targets and interpreting financial documents and reports • technical and analytical skills to interpret business document, reports and financial statements and projections • relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities • solve problem and develop contingency plans • using computers and software packages to record and manage data and to produce reports • evaluate using assessment work and outcomes • observe for identifying appropriate people, resources and to monitor work

Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Confectionary Processing Level IV	
Unit Title	**Apply Problem Solving Techniques and Tools**
Unit Code	**IND COP4 24 0613**
Unit Descriptor	This unit of competency covers the knowledge, skills and attitude required to apply scientific problem solving techniques and tools to enhance quality, productivity and other kaizen elements on continual basis.

Elements	Performance criteria
1. Identify and select theme/problem.	1.1 ***Safety requirements*** are followed in accordance with safety plans and procedures. 1.2 All possible problems related to the process /Kaizen elements are listed using ***statistical tools and techniques***. 1.3 All possible problems related to kaizen elements are identified and listed on Visual Management Board/Kaizen Board. 1.4 Problems are classified based on obviousness of cause and action. 1.5 Critical factors like the number of customers affected, Potentials for bottlenecks, and number of complaints etc… is selected. 1.6 Problems related to priorities of ***Kaizen Elements*** are given due emphasis and selected.
2. Grasp current status and set goal.	2.1 The extent of the problem is defined. 2.2 Appropriate and achievable goal is set.
3. Establish activity plan.	3.1 The problem is confirmed. 3.2 High priority problem is selected. 3.3 The extent of the problem is defined. 3.4 Activity plan is established as per ***5W1H***.
4. Analyze causes of a problem.	4.1 All possible causes of a problem are listed. 4.2 Cause relationships are analyzed using***4M1E***. 4.3 Causes of the problems are identified. 4.4 Root causes are selected. 4.5 The root cause which is most directly related to the problem is selected. 4.6 All possible ways are listed using ***creative idea generation*** to eliminate the most critical root cause.

	4.7 The suggested solutions are carefully tested and evaluated for potential complications. 4.8 Detailed summaries of the action plan are prepared to implement the suggested solution.
5. Examine countermeasures and their implementation.	5.1 Action plan is implemented by ***medium KPT*** members. 5.2 Implementation is monitored according to the agreed procedure and activities are checked with preset plan.
6. Assess effectiveness of the solution.	6.1 ***Tangible and intangible results*** are identified. 6.2 The results are verified over time. 6.3 Tangible results are compared with targets using ***various types of diagram***.
7. Standardize and sustain operation.	7.1 If the goal is achieved, the new procedures are standardized and made part of daily activities. 7.2 All employees are trained on the new ***Standard Operating Procedures (SOPs)***. 7.3 SOP is verified and followed by all employees. 7.4 The next problem is selected to be tackled by the team.

Variable	**Range**
Safety requirements	may include but not limited to: • OHS requirements include legislation, material safety, managements system, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislations, relevant health regulation, manual handling procedure and organization insurance requirements
Statistical tools and techniques	may include but not limited to: • 7 QC tools may include: ➢ Stratification ➢ Pareto Diagram ➢ Cause and Effect Diagram ➢ Check Sheet ➢ Control Chart/Graph ➢ Histogram ➢ Scatter Diagram • QC techniques may include: ➢ Brain storming ➢ Why analysis ➢ What if analysis ➢ 5W1H

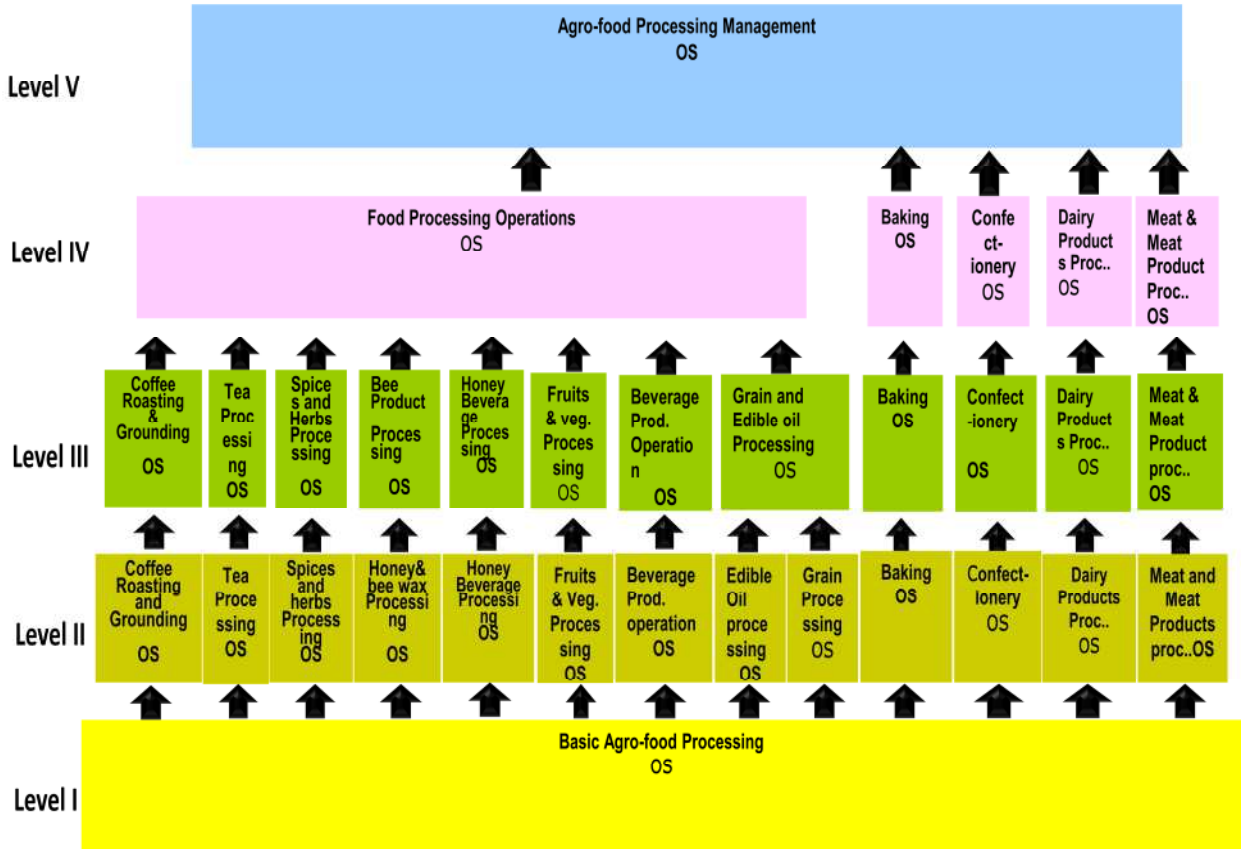
Kaizen Elements	may include but not limited to: • Quality • Cost • Productivity • Delivery • Safety • Moral • Environment • Gender equality
5W1H	may include but not limited to: • Who: person in charge • Why: objective • What: item to be implemented • Where: location • When: time frame • How: method
4M1E	may include but not limited to: • Man • Machine • Method • Material and • Environment
Creative idea generation	may include but not limited to: • Brainstorming • Exploring and examining ideas in varied ways • Elaborating and extrapolating • Conceptualizing
Medium KPT	may include but not limited to: • 5S • 4M (machine, method, material and man) • 4P (Policy, procedures, People and Plant) • PDCA cycle • Basics of IE tools and techniques
Tangible and intangible results	may include but not limited to: • Tangible result may include quantifiable data • Intangible result may include qualitative data
Various types of diagram	may include but not limited to: • Line graph • Bar graph • Pie-chart • Scatter diagram • Affinity diagram
Standard Operating Procedures (SOPs)	may include but not limited to: • The customer demand

	• The most efficient work routine (steps) • The cycle times required to complete work elements • All process quality checks required to minimize defects/errors • The exact amount of work in process required

Evidence Guide	
Critical Aspects of Assessment	Demonstrates skills and knowledge competencies to: • Apply all relevant procedures and regulatory requirements to ensure quality and productivity of an organization. • Detect non-conforming products/services in the work area • Apply effective problem solving approaches/strategies. • Implement and monitor improved practices and procedures • Apply statistical quality control tools and techniques.
Underpinning Knowledge and Attitude	Demonstrates knowledge of: • QC story/PDCA cycle/ • QC story/ Problem solving steps • QCC techniques • 7 QC tools • Basic IE tools and techniques. • SOP • Quality requirements associated with the individual's job function and/or work area • Workplace procedures associated with the candidate's regular technical duties • Relevant health, safety and environment requirements • organizational structure of the enterprise • Lines of communication • Methods of making/recommending improvements. • Reporting procedures
Underpinning Skills	Demonstrates skills to: • Apply problem solving techniques and tools • Apply statistical analysis tools • Apply Visual Management Board/Kaizen Board. • Detect non-conforming products or services in the work area • Document and report information about quality, productivity and other kaizen elements. • Contribute effectively within a team to recognize and recommend improvements in quality, productivity and other kaizen elements. • Implement and monitor improved practices and procedures. • Organize and prioritize activities and items. • Read and interpret documents describing procedures • Record activities and results against templates and other prescribed formats.

Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Sector: Industry
Sub- sector: Agro-food Processing



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This occupational standard was developed on the date of June 25, 2013 at Debre Zeyit Ethiopian Management Institute.

COMMENT TEMPLATE

The Federal TVET Agency values your feedback of the document.
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- **Phone# +251911207386/+251911641248/+251923787992 and**
- **E-mail: bizunehdebebe@yahoo.com/ Abebaw_maemer@yahoo.com /won_get@yahoo.com.**