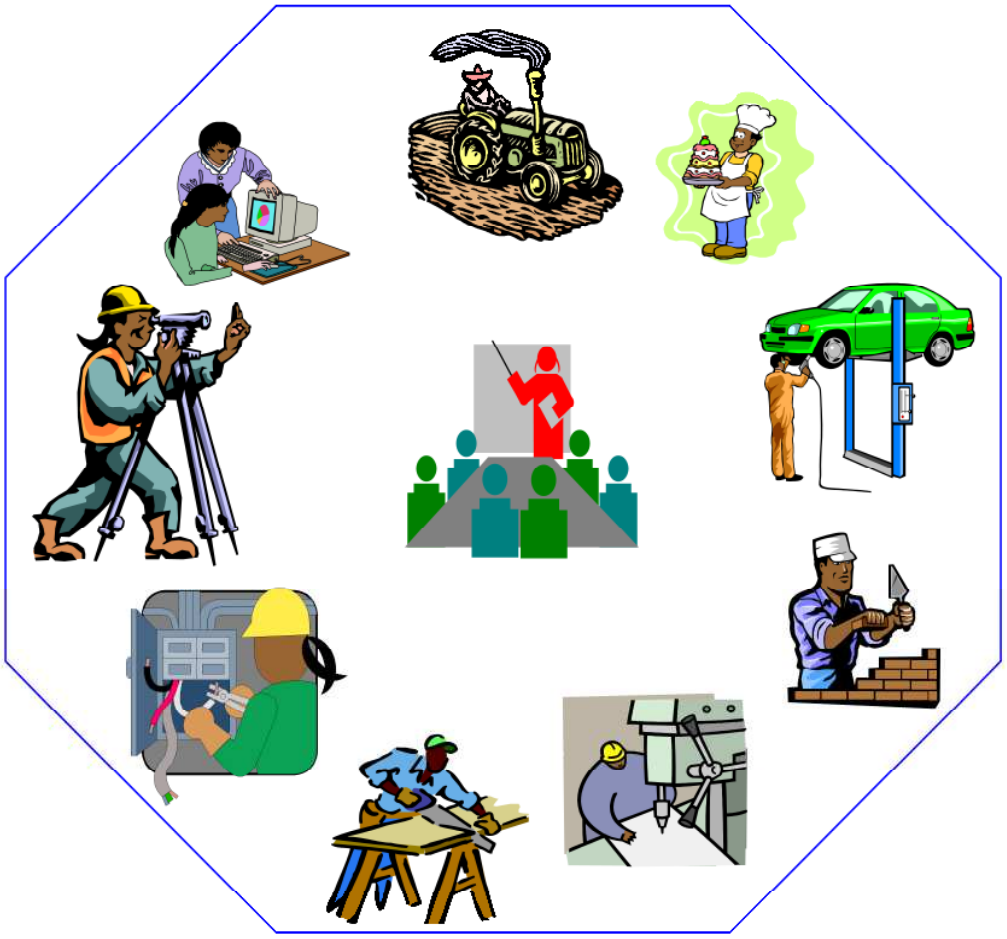
**Federal Democratic Republic of Ethiopia**

# OCCUPATIONAL STANDARD

# EDIBLE OIL PROCESSING

## NTQF Level II



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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 has 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) are - a 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 Ethiopia 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 Ethiopian Occupational Standard comprised of Units of Competence.

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

- Reference to Industry Sector, Occupational title, NTQF level
- Unit code
- Unit title
- Unit descriptor
- Unit of Competence
- 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 respective 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 Unit of 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: Edible Oil Processing** | | |
|---|---|---|
| **Occupational Code: IND EOP** | | |
| ***NTQF Level II*** | | |
| **IND EOP2 01 0613**<br>Apply Mill Operations and Technologies | **IND EOP2 02 0613**<br>Handle Oil Seed in a Storage Area | **IND EOP2 03 0613**<br>Operate an Oil Seed Cleaning Process |
| **IND EOP2 04 0613**<br>Operate an Oil Seed Conditioning Process | **IND EOP2 05 0613**<br>Operate a Scalping and Grading Process | **IND EOP2 06 0613**<br>Operate a Purification Process |
| **IND EOP2 07 0613**<br>Operate a Break Roll Process | **IND EOP2 08 0613**<br>Operate the Scratching and Sizing Process | **IND EOP2 09 0613**<br>Operate an Extraction Process |
| **IND EOP2 10 0613**<br>Operate a Bleaching Process | **IND EOP2 11 0613**<br>Operate a Soap Splitting Process | **IND EOP2 12 0613**<br>Operate a Neutralization Process |
| **IND EOP2 13 0613**<br>Operate a Deodorizing Process | **IND EOP2 14 0613**<br>Operate a Winterization Process | **IND EOP2 15 0613**<br>Operate a Hydrogenation Process |
| **IND EOP2 16 0613**<br>Operate an Interesterification Process | **IND EOP2 17 0613**<br>Operate a Fractionation Process | **IND EOP2 18 0613**<br>Operate Margarine and Vegetable Ghee Production Process |
| **IND EOP2 19 0613**<br>Operate a Packaging Process | **IND EOP2 20 0613**<br>Implement the Food Safety Program and Procedures | **IND EOP2 21 0613**<br>Participate in Workplace Communication |
| **IND EOP2 22 0613**<br>Work in Team Environment | **IND EOP2 23 0613**<br>Develop Business Practice | **IND EOP2 24 0613**<br>Standardize and Sustain 3S |

| Occupational Standard: Edible Oil Processing Level II | |
|---|---|
| **Unit Title** | **Apply Mill Operations and Technologies** |
| **Unit Code** | **IND EOP2 01 0613** |
| **Unit Descriptor** | This unit of competency covers the overall knowledge of oil seed milling operations employee requires to operate safely and effectively in an oil seed mill. |

| Element | Performance Criteria |
|---|---|
| 1. Locate mill departments, walkways, storage and assembly areas | 1.1. Raw materials for ***milling department*** received and storage areas are located.<br>1.2. Control rooms and other main operator stations are located.<br>1.3. Milling, batch and mixing, mash in the edible oil production areas is located.<br>1.4. Support services, including maintenance, administration, laboratory and quality assurance, and information technology departments are located.<br>1.5. Finished ***products*** storage and dispatch areas are located.<br>1.6. Walkways and emergency assembly areas are located. |
| 2. Describe flow of product through mill and purpose of each stage in the production process | 2.1. Main raw materials and source are described.<br>2.2. Receiver processes, including weighing, volume and quality checks are described.<br>2.3. Milling process is described.<br>2.4. Batching and mixing processes, including recipe, are described.<br>2.5. Post-milling processes, including, scratching, cooking, pressing, screening and, filtering are described. |
| 3. Describe range of edible oil processes, their purpose and target users | 3.1. Target users for edible oil mill products are identified.<br>3.2. Benefits of edible oils are described to producers.<br>3.1. ***Edible oil production processes*** are identified. |
| 4. Describe main risks to edible oil seeds milling operations | 4.1. Explain importance of physical, chemical& biological l hazard control and its hazard control procedures are explained.<br>4.2. Handling procedures are identified.<br>4.3. Typical pests are described and pest control procedures explained.<br>4.4. Main risks to quality, including contamination, incorrect recipe adherence, incorrect sequencing and product transference, incorrect labeling and packaging are described.<br>4.5. Environmental procedures for mill operations are identified. |

| Variables | Range |
|---|---|
| Oil seed mill departments | May include but not limited to:<br>• road and rail oil seed receiver, including weighbridges, general inwards goods receiver<br>• bulk and packaged raw materials storage<br>• milling, batch oil seed milling production areas<br>• maintenance<br>• laboratory and quality assurance<br>• information technology<br>• bulk and packaged finished products storage |
| Oil seed milling products | May include but not limited to:<br>• crushed oil seeds<br>• cake & meal |
| Edible oil production process | May include but not limited to:<br>• batching and blending of components, including any other additives<br>• scalping grading<br>• break roll<br>• scratching<br>• extracting/ oil seed conditioning/solvent extraction<br>• refining<br>• labeling<br>• packing and dispatch |

| Evidence Guide | |
|---|---|
| Critical Aspects of competence | A candidate must demonstrate the ability to:<br>• identify and locate departments, major walkways and assembly areas in the Oil seed mill<br>• describe the major steps in the oil seed mill production process<br>• describe oilseed mill products and purposes, including, crushed/grounded oil seeds<br>• Identify major risk factors including dust, pests, contamination and incorrect adherence to recipes.(physical, chemical and biological) |
| Underpinning Knowledge | Demonstrate Knowledge of:<br>• purpose and basic principles of each part of the milling production process, such as volumetric metering, scalping grading, oil seed conditioning, break roll, scratching, extracting, refining sequencing of production to minimize transference and cross-contamination, and traceability procedures<br>• range of raw materials and typical sourcing<br>• edible oil product range and target consumers<br>• basic operating principles of equipment and main equipment components<br>• basic operating principles of process control, including the relationship between control rooms and panels and the physical equipment |

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| | • the flow of the edible oil production process<br>• quality characteristics and uses of finished edible oil<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• methods used to monitor the milling process, such as inspecting, measuring and testing as required by the process<br>• contamination risks and related controls<br>• OHS hazards and controls, including dust, contamination and materials requiring special handling procedures and emergency assembly areas |
| Underpinning Skills | Demonstrate skills to:<br>• access workplace information to identify processing requirements<br>• read diagrams and sketches<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Handle Oil Seed in a Storage Area** |
| **Unit Code** | **IND EOP2 02 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to handle oil seed in a storage area, including taking samples, segregating and moving oil seed in a manner that minimizes dust and exposure to pests. |

| Element | Performance Criteria |
|---|---|
| 1. Sample oil seed for testing | 1.1. Representative ***samples*** of ***oil seed*** are taken for testing according to ***legislative requirements***.<br>1.2. Samples are prepared for dispatch, including labeling and packaging according to enterprise requirements.<br>1.3. All ***sampling equipment*** are identified. |
| 2. Move oil seeds into and out of storage | 2.1. Oil seed for handling and storage is correctly identified.<br>2.2. Appropriate silo types and ***handling equipment*** are selected for various oil seeds in relation to their storage characteristics and flow properties.<br>2.3. Oil seed is segregated according to type, variety and quality characteristics according to enterprise requirements and appropriate records kept.<br>2.4. Measures are taken to minimize pest infestation.<br>2.5. Oil seed is moved into and out of storage facility according to Occupational Health and Safety (OHS) requirements.<br>2.6. Oil seed is regularly checked during movement for contamination.<br>2.7. ***Storage facility*** and handling equipment are thoroughly cleaned after emptying.<br>2.8. Temporary storages are dismantled according to enterprise requirements and storage characteristics.<br>2.9. Suitable measures are implemented to minimize the effect of desiccant dusts on the flow properties of oil seed. |
| 3. Required personals and equipment's | 3.1 Personnel's and ***other equipment's*** should be specified according to their perspective requirements of ***documentation***. |

| Variables | Range |
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| Samples for testing | May include but not limited to:<br>• Moisture &foreign matter<br>• insects (live and dead)<br>• weed and other commodity seeds<br>• cracked oil seed |

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| | • weather affected oil seed/ Immature seed/<br>• oil seed size and weight<br>• germination, Acidity, oil content, impurity |
| Legislative requirements | May include but not limited to:<br>• All work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements |
| Oil seeds | May include but not limited to:<br>• Niger seed<br>• Rape seed<br>• Lin seed<br>• Cotton seed<br>• Ground nut<br>• Soya bean …etc. |
| Oil seed movements | May include but not limited to:<br>• receipt<br>• dispatch<br>• aeration<br>• treatment and/or blending of oil seed grades |
| Storage facility | May include but not limited to:<br>• all types of temporary and permanent storage |
| Sampling and analysis equipment | May include but not limited to:<br>• all testing apparatus<br>• sampling, measuring and sieving equipment<br>• operational charts<br>• calibration and identification samples<br>• enterprise/client instructions |
| Handling equipment | May include but not limited to:<br>• silo conveyors<br>• elevators<br>• chutes |
| Other equipment | May include but not limited to:<br>• computing equipment used by enterprise<br>• two way radio/telephone<br>• tractors<br>• front end loaders<br>• wall charts and other visual recording methods<br>• warning devices<br>• ventilation/aeration equipment |
| Equipment checks | May include but not limited to:<br>• mechanical units integral to oil seed handling equipment, such as gear boxes, bearings and oil levels |
| Other personnel | May include but not limited to:<br>• other operators at storage site<br>• truck drivers<br>• silo operators<br>• weight bridge operators and associated office personnel |

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| Documentation | May include but not limited to:<br>• quantities and grades stored<br>• oil seed movements and cartage documentation<br>• weight tally sheets<br>• equipment and operations log sheets<br>• stock checks |

| **Evidence Guide** | |
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| Critical Aspects of competence | A candidate must demonstrate the ability to:<br>• take required samples<br>• conduct pre-start checks on machinery and equipment used for oil seed storage and transfers<br>• start, operate, monitor and adjust process equipment<br>• recognize different oil seed types and varieties<br>• check oil seed for pest and other contamination<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices where oil seed is intended for human consumption. |
| Underpinning Knowledge | Demonstrate Knowledge of*:*<br>• oil seed hygiene and sealing requirements<br>• oil seed varieties and types<br>• segregation requirements to maintain integrity and quality of oil seed<br>• flow of oil seed in storage area from receipt to dispatch<br>• typical storage equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• contamination/food safety risks associated with the oil seed storage process and related control measures<br>• Occupational Health and Safety (OHS) hazards and controls, including the limitations of protective clothing and equipment relevant to the work process<br>• requirements of different shutdowns as appropriate to the oil seed storage process and workplace requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• environmental issues and controls relevant to the oil seed storage process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with process monitoring and control where relevant |

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| | • routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrate skills to:<br>• access workplace information to identify oil seed storage requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary materials and services<br>• start, operate, monitor and adjust equipment used to move and store oil seed to achieve required outcomes<br>• monitor supply and flow of materials to and from the oil seed cleaning process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take oil seed cleaning process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• conduct pre-operational checks, start up, and safely and effectively operate and shut down equipment, including emergency shutdown procedures<br>• coordinate with others on site<br>• position initial load for even oil seed distribution<br>• safe and correct use of mobile and other equipment<br>• dismantling of temporary storage of the type used by enterprise<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate an Oil Seed Cleaning Process** |
| **Unit Code** | **IND EOP2 03 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a cleaning process to screen separate impurities from the grist/seed/ prior to the conditioning process. |

| Element | Performance Criteria |
|---|---|
| 1. Prepare the oil seed cleaning equipment and process for operation | 1.1. Materials and ***services*** are confirmed and available to meet operating requirements.<br>1.2. Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>1.4. ***Operation of equipment and processes*** parameters are entered as required to meet safety and production requirements.<br>1.5. The bin system is setup to meet production requirements.<br>1.6. ***Oil seed cleaning equipment*** performance is checked and adjusted as required.<br>1.7. Pre-start checks are carried out as required by workplace requirements. |
| 2. Operate and monitor the oil seed cleaning process | 2.1. The process is started and operated according to ***policies and procedures***.<br>2.2. Operation of equipment and processes is monitored to identify variation in operating conditions.<br>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to ***workplace information*** reporting requirements.<br>2.4. The process is monitored to confirm that stock meets grist specifications.<br>2.5. The process is monitored to confirm that impurity removal rate meets workplace information.<br>2.6. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within workplace specification.<br>2.7. The work area is maintained according to housekeeping standards.<br>2.8. Work is conducted in accordance with ***legislative*** environmental guidelines. |

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| | 2.9. ***Workplace information*** records are maintained according to workplace recording requirements. |
| 3. Shut down the oil seed cleaning process | 3.1. The appropriate ***shutdown procedure*** is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to workplace reporting requirements. |

| **Variable** | **Range** |
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| Stock and Services | May include but not limited to:<br>• power<br>• vacuum<br>• compressed and instrumentation air |
| Processes | May include but not limited to:<br>• the use of process control panels and systems |
| Oil seed cleaning equipment | May include but not limited to:<br>• intake equipment<br>• day bins<br>• screens<br>• separators/magnetic separator/<br>• aspirators<br>• extractors/destoners<br>• scales<br>• dampers<br>• measurers/mixers<br>• impact grinders<br>• materials handling equipment |
| Policies and procedures | May include but not limited to:<br>• Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements |
| Legislative | May include but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| Evidence Guide | |
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| Critical Aspects of competence | A candidate must demonstrate the ability to:<br>• conduct pre-start checks on machinery and equipment used for oil seed cleaning<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge | Demonstrate Knowledge of*:*<br>• purpose and basic principles of the oil seed cleaning process<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the oil seed cleaning process and the effect of outputs on downstream processes<br>• quality characteristics to be achieved by the oil seed cleaning process<br>• quality requirements of materials and effect of variation on oil seed cleaning process performance<br>• how and why various kinds of oil seeds grinded to make grist<br>• purpose of the break rolls<br>• Purpose and methods the separation of oil from impurities, fibers, kernels,<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the oil seed cleaning process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the oil seed cleaning process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the oil seed cleaning process and related control measures<br>• common causes of variation and corrective action required<br>• OHS hazards and controls, including the limitations of protective clothing and equipment relevant to the work process<br>• requirements of different shutdowns as appropriate to the oil seed cleaning process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage |

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| | • isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the oil seed cleaning process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrate skills to:<br>• access workplace information to identify oil seed cleaning process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary materials and services<br>• 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 required screens are fitted and related equipment is clean and correctly configured for oil seed cleaning process 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<br>• start, operate, monitor and adjust oil seed cleaning process equipment to achieve required outcomes, including visual inspection and regular checking of collection points (filters and screens) and over tail bags<br>• carry out process adjustments to maintain efficient removal of impurities with minimal removal of product<br>• monitor supply and flow of materials to and from the oil seed cleaning process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take oil seed cleaning process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures |

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| | • collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate an Oil Seed Conditioning Process** |
| **Unit Code** | **IND EOP2 04 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a process to condition oil seed by using steam to create a moisture level required for the separation and reduction processes. |

| Element | Performance Criteria |
|---|---|
| 1. Prepare the oil seed conditioning equipment and process for operation | 1.1. ***Stock and services*** are confirmed and available to meet operating requirements.<br>1.2. Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>1.4. ***Operation of equipment and processes*** parameters are entered as required to meet safety and production requirements.<br>1.5. ***Oil seed conditioning equipment*** performance is checked and adjusted as required.<br>1.6. Pre-start checks are carried out as required by workplace requirements. |
| 2. Operate and monitor the oil seed conditioning process | 2.1. The process is started and operated according to ***Policies procedures***.<br>2.2. Equipment is monitored to identify variation in operating conditions.<br>2.3. Variation in equipmen***t*** operation is identified and maintenance requirements are reported according to workplace reporting requirements.<br>2.4. The ***process*** is monitored to confirm that conditioned product meets grist moisture specifications.<br>2.5. Conditioned product is stored according to ***Legislative*** requirements.<br>2.6. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within ***Workplace information***.<br>2.7. The work area is maintained according to housekeeping standards.<br>2.8. Work is conducted in accordance with Legislative environmental guidelines<br>2.9. Workplace records are maintained according to workplace recording requirements. |

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| 3. Shut down the oil seed conditioning process | 3.1. The appropriate shutdown procedure is identified.<br>3.2. The process is shut down according to ***workplace procedures***.<br>3.3. Maintenance requirements are identified and reported according to ***workplace reporting requirements***. |

| **Variable** | **Range** |
|---|---|
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Stock/material | May include but not limited to:<br>• clean oil seed direct from the mill/<br>• cleaned from the cleaning process |
| Services | May include but not limited to:<br>• power<br>• /steam/<br>• compressed and instrumentation air |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| conditioning & pressing equipment | May include but not limited to:<br>• conditioning bins/cooker/<br>• mechanical/pneumatic stock transfer equipment |
| oil seed conditioning process | May include but not limited to:<br>• a two-part process |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| **Evidence Guide** | |
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| Critical Aspects of competence | A candidate must demonstrate the ability to:<br>• conduct pre-start checks on machinery used for oil seed conditioning<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes |

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| | • take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge | Demonstrate Knowledge of*:*<br>• purpose and basic principles of the conditioning process<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the conditioning process and the effect of outputs on downstream edible oil production processes<br>• quality characteristics to be achieved by the conditioning process<br>• quality requirements of materials and effect of variation on conditioning process performance<br>• types of oil seed and their qualities<br>• microbiological considerations in conditioning oil seed<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the conditioning process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the conditioning process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the conditioning process and related control measures, including potential risks associated with out-of-specification lying times of conditioned oil seed<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the conditioning process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the conditioning process, including waste/rework collection and handling procedures related to the process |

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| | • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrate skills to:<br>• access workplace information to identify conditioning process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary materials and services<br>• confirm conditioning and lying times<br>• calculate water addition to suit machine and wheat type<br>• 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 related equipment is clean and correctly configured for oil seed conditioning process 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<br>• start, operate, monitor and adjust conditioning process equipment to achieve required outcomes, including monitoring control points and conducting tests as required, such as moisture tests to confirm process remains within specification<br>• monitor supply and flow of materials to and from the conditioning process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take conditioning process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• use oral communication skills/language competence to fulfill the job role as specified by the organization<br>• , including questioning, active listening, asking for clarification and seeking advice from supervisor<br>• work cooperatively within a culturally diverse workforce |

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| 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:<br>• Interview / Written Test<br>• Observation / Demonstration with Oral Questioning |
| Context of Assessment | Competence could be, assessed in the work place or in a simulated work place setting. |

| Occupational Standard: Edible Oil Processing Level II | |
|---|---|
| **Unit Title** | **Operate a Scalping and Grading Process** |
| **Unit Code** | **IND EOP2 05 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a production process for the separation of the break stock (chop) into appropriate flows to the next break, purifiers and sizing rolls. |

| Element | Performance Criteria |
|---|---|
| 1. Prepare the scalping and grading equipment and process for operation | 1.1. ***Stock/material*** and ***services*** are confirmed and available to meet operating requirements.<br>1.2. Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>1.4Operation of equipment and processes are entered as required to meet safety and production requirements.<br>1.5. Equipment performance is checked and adjusted as required.<br>1.6. Pre-start checks are carried out as required by workplace requirements. |
| 2. Operate and monitor the scalping and grading process | 2.1. The process is started and operated according to ***policies procedures***.<br>2.2.***Scalping and grading equipment*** is monitored to identify variation in operating conditions.<br>2.3. Variation in equipment operations identified and maintenance requirements are reported according to ***workplace reporting requirements***.<br>2.4. The process is monitored to confirm that particle size of stock meets specifications.<br>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the ***process*** within specification.<br>2.6. The work area is maintained according to housekeeping standards.<br>2.7. Work is conducted in accordance with Legislative environmental guidelines.<br>2.8. Workplace records are maintained according to ***Workplace information*** requirements. |
| 3. Shut down the scalping and grading process | 3.1. The appropriate ***shutdown procedure*** is identified.<br>3.2. The process is shut down according to shutdown procedures.<br>3.3. Maintenance requirements are identified and reported according to workplace reporting requirements. |

| Variable | Range |
|---|---|
| Stock | Stock from break rolls of reduction rolls supplies the scalping and grading process |
| Services | May include but not limited to:<br>• power<br>• vacuum<br>• compressed and instrumentation air |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Scalping and grading equipment | May include but not limited to:<br>• plain sifters and accessories<br>• mechanical/pneumatic stock transfer equipment<br>Supporting systems may include:<br>• compressors<br>• aspirators<br>• filters |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Shutdown procedures | cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| Evidence Guide | |
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| Critical aspects of competence | A candidate must demonstrate the ability to:<br>• conduct pre-start checks on machinery and equipment used for scalping and grading<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge | Demonstrate Knowledge of:<br>• purpose and basic principles of the scalping and grading process |

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

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| | • select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary materials and services<br>• 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 related equipment is clean and correctly configured for scalping and grading process 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<br>• start, operate, monitor and adjust scalping and grading process equipment to achieve required outcomes, such as monitoring control points and conducting inspections as required to confirm process remains within specification, including regular inspection of collection points and sifter outlets to confirm process efficiency and visual inspection of product samples to confirm particle size<br>• monitor supply and flow of materials to and from the scalping and grading process<br>• adjust and clean screens<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• demonstrate batch/product changeovers<br>• follow isolation and lock out/tag out procedures as required to take scalping and grading process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Purification Process** |
| **Unit Code** | **IND EOP2 06 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a separation and grading process to remove particles of bran, with or without endosperm or germ attached, from the stock flow. |

| Element | Performance Criteria |
|---|---|
| 1. Prepare the purification equipment and process for operation | 1.1. ***Stock and services*** are confirmed and available to meet Policies and procedures.<br>1.2. Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>1.4. ***Operation of equipment and processes*** parameters are entered as required to meet requirements and procedures.<br>1.5. ***Equipment*** performance is checked and adjusted as required.<br>1.6. Pre-start checks are carried out as required by ***Workplace information*** requirements. |
| 2. Operate and monitor the purification process | 2.1. The process is started and operated according to ***Policies procedures***.<br>2.2. Equipment is monitored to identify variation in operating conditions.<br>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements.<br>2.4. The process is monitored to confirm that particle size and quantity of stock meets specifications.<br>2.5. Fine bran is removed from the semolina and the bran product with endosperm attached is returned to the purification process or scratch rolls for further processing.<br>2.6. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification.<br>2.7. The work area is maintained according to housekeeping standards.<br>2.8. Work is conducted in accordance with legislative environmental guidelines.<br>2.9. Workplace records are maintained according to workplace recording requirements. |

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

| **Variable** | **Range** |
|---|---|
| Stock | May include but not limited to the scratch and sizing process |
| Services | May include but not limited to:<br>• power<br>• vacuum<br>• compressed and instrumentation air |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Equipment | May include but not limited to:<br>• purifiers with related dust collection systems<br>• mechanical/pneumatic stock transfer equipment |
| Workplace information | may include:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Policies and procedures | Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements |
| Legislative requirements | includes:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Shutdown procedures | cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| **Evidence Guide** | |
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| Critical aspects of competence | A candidate must demonstrate the ability to:<br>• conduct pre-start checks on machinery and equipment used for purification<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |

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| Underpinning Knowledge | Demonstrate Knowledge of:<br>• purpose and basic principles of the purification process<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the purification process and the effect of outputs on downstream flour milling processes<br>• quality characteristics to be achieved by the purification process<br>• quality requirements of materials and effect of variation on purification process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the purification process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the purification process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the purification process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the purification process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the purification process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrate skills to:<br>• access workplace information to identify purification process requirements<br>• select, fit and use personal protective clothing and/or equipment |

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| | • confirm supply of necessary materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, fitting required screen sizes, cancelling isolation or lock outs as required, confirming that related equipment is clean and correctly configured for purification 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<br>• start, operate, monitor and adjust purification process equipment to achieve required outcomes, including monitoring control points, conducting inspections and making adjustments to stock flow, feed gates and screens as required to confirm purification process remains within specification, and checking efficiency to remove offal with minimal product removal<br>• monitor supply and flow of materials to and from the purification process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take purification process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanities equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Break Roll Process** |
| **Unit Code** | **IND EOP2 07 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a process to separate bran from the endosperm. |

| Element | Performance Criteria |
|---|---|
| 1. Prepare the break roll equipment and process for operation | 1.1. Materials and ***services*** are confirmed and available to meet operating requirements according to ***policies and procedures***.<br>1.2. Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>1.4. Processing/operating parameters are entered as required to meet safety and production requirements.<br>1.5. ***Equipment*** performance is checked and adjusted as required.<br>1.6. Pre-start checks are carried out as required by workplace requirements. |
| 2. Operate and monitor the break roll process | 2.1. The ***process*** is started and operated according to workplace procedures.<br>2.2. ***Operation of equipment and processes*** is monitored to identify variation in operating conditions.<br>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements.<br>2.4. The process is monitored to confirm that ***by-product*** separated from endosperm meets specifications.<br>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification.<br>2.6. The work area is maintained according to housekeeping standards.<br>2.7. Work is conducted in accordance with workplace environmental guidelines.<br>2.8. ***Workplace records or information*** are maintained according to workplace recording requirements. |
| 3. Shut down the break roll process | 3.1. The appropriate ***shutdown procedure*** is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to workplace reporting requirements. |

| Variable | Range |
|---|---|
| Services | May include but not limited to:<br>• Power, vacuum, 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 |
| Legislative requirements may include but not limited to: | • the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Workplace records or information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Break roll equipment | May include but not limited to:<br>• break rolls (roller mills)<br>• mechanical/pneumatic stock transfer equipment<br>• bran finishers<br>• dressing machines |
| Oil seed for the break roll process | oil seed for the break roll process is supplied from the cleaning and conditioning processes |
| By-products | bran |
| Shutdown procedures | cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| Evidence Guide | |
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| Critical aspects of competence | A candidate must demonstrate the ability to:<br>• conduct pre-start checks on machinery and equipment used to separate bran from the endosperm<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge | • purpose and basic principles of the break roll process, including how and why the endosperm separation takes place<br>• 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 |

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

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| | related parameters, cancelling isolation or lock outs as required, confirming that related equipment is clean and correctly configured for break roll process 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<br>• start, operate, monitor and adjust reduction process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ correct product type/quantity<br>➢ moisture content of incoming wheat<br>➢ break roll releases<br>➢ even spread of feed across rolls<br>➢ mill balance and even grind/correct particle size<br>• monitor supply and flow of materials to and from the break roll process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take break roll process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
|---|---|
| **Unit Title** | **Operate the Scratching and Sizing Process** |
| **Unit Code** | **IND EOP2 08 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required setting up, operating, adjusting and shut down a separation process to ensure as little bran as possible is in the remaining endosperm. |

| Element | Performance Criteria |
|---|---|
| 1. Prepare the scratch and sizing equipment and process for operation | 1.1. ***Services*** are confirmed and available to meet operating requirements.<br>1.2. Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>1.4. Processing/operating parameters are entered as required to meet Legislative requirements and production requirements.<br>1.5. ***Equipment*** performance is checked and adjusted as required.<br>1.6. Pre-start checks are carried out as required by policies and procedure requirements. |
| 2. Operate and monitor the scratch and sizing process | 2.1. The process is started and operated according to ***Policies and procedures***.<br>2.2. ***Operation of equipment and processes*** monitored to identify variation in operating conditions.<br>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to ***workplace information*** reporting requirements.<br>2.4. The process is monitored to confirm that particle size and quantity of ***stock*** meet specifications.<br>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification.<br>2.6. The work area is maintained according to housekeeping standards.<br>2.7. Work is conducted in accordance with workplace environmental guidelines.<br>2.8. Workplace records are maintained according to workplace information recording requirements. |
| 3. Shut down the scratch and sizing process | 3.1. The appropriate ***shutdown*** procedure is identified.<br>3.2. The process is shut down according to workplace procedures. |

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| | 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements. |

| Variable | Range |
|---|---|
| Services | May include but not limited to:<br>• power<br>• vacuum<br>• compressed and instrumentation air |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Stock | May include but not limited to:<br>• Stock for the scratch and sizing is supplied from the scalping and grading process |
| Shutdown procedures | cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| Evidence Guide | |
|---|---|
| Critical Aspects of competence | A candidate must demonstrate the ability to:<br>• conduct pre-start checks on machinery used for scratching and sizing<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge | Demonstrate Knowledge of:<br>• purpose and basic principles of the scratch and sizing process |

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|---|---|
| | • 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<br>• services required and action to take if services are not available<br>• the flow of the scratch and sizing process and the effect of outputs on downstream oil milling processes<br>• quality characteristics to be achieved by the scratch and sizing process<br>• quality requirements of materials and effect of variation on scratch and sizing process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the scratch and sizing production process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the scratch and sizing process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the scratch and sizing process and related control measures<br>• common causes of variation and corrective action required<br>• OHS hazards and controls, including the limitations of protective clothing and equipment relevant to the work process<br>• requirements of different shutdowns as appropriate to the scratch and sizing process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the scratch and sizing process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | • access workplace information to identify scratch and sizing process requirements<br>• select, fit and use personal protective clothing and/or equipment |

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| | • confirm supply of necessary materials and services<br>• 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 related equipment is clean and correctly configured for scratch and sizing process 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<br>• start, operate, monitor and adjust scratch and sizing process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm that the process remains within specification, such as:<br>➢ correct product type/quantity<br>➢ roll releases<br>➢ even spread of feed across rolls<br>➢ mill balance and even grind/correct particle size<br>• monitor supply and flow of materials to and from the scratch and sizing process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take scratch and sizing process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate an Extraction Process** |
| **Unit Code** | **IND EOP2 09 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down processes used to extract edible oil from plant material using mechanical &solvents extraction methods.<br>This unit applies to production operators working in the edible oil production sector. This person would typically work within defined Good Manufacturing Practice (GMP) programs and procedures. |

| Elements | Performance Criteria |
|---|---|
| 1. Prepare the extraction equipment and process for operation | 1.1. Materials& service are confirmed, blended and prepared to meet production requirements.<br>1.2. ***Workplace documentation*** relevant to work area activities is identified and followed.<br>1.3. The required facilities, storage, ***Equipment*** and personnel are available.<br>1.4. Line clearance procedures have been carried out.<br>1.5 ***Policies and procedures*** are followed to eliminate or control the risk of cross-contamination.<br>1.6. Material is loaded into percolator and solvents are added to specification. |
| 2. Operate and monitor the extraction process | 2.1. The ***extraction process*** is monitored to confirm that specifications are met.<br>2.2. Out-of-specification product/process is identified, rectified and/or reported to maintain the process within specification.<br>2.3. The work area is maintained according to housekeeping standards.<br>2.4 Operation of equipment and processes is monitored to identify variation in operating conditions.<br>2.5 Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements.<br>2.6 The process is monitored to confirm that by-product separated from endosperm meets specifications.<br>2.7. Work is conducted according to Legislative environmental standards.<br>2.8. Workplace documentation is maintained according to workplace reporting requirements. |

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| 3. Shut down the extraction process | 3.1. The process is shut down according to workplace procedures and work practices.<br>3.2. Maintenance requirements are identified and reported according to workplace reporting requirements. |

| Variable | Range |
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| Workplace documentation | May include but not limited to:<br>• specifications<br>• manufacturing formulae<br>• processing instructions<br>• continuous production records<br>• Standard Operating Procedures (SOPs)<br>• OHS information, including Material Safety Data Sheets (MSDS) |
| Equipment | May include but not limited to:<br>• blenders/mixers<br>• percolators<br>• tamping rods<br>• collection vessels<br>• cooker<br>• Hydraulic press<br>• Screw conveyor ,screener ,cooker, filter press<br>• Extraction vessel, desolventizer and Toaster<br>• Condenser<br>• Distillation apparatus<br>• Cake crusher, exchangers<br>• Conveyors(belt, chain) |
| Material | • Conditioned Niger seed<br>• >> Rape seed<br>• >> Lin seed<br>• >> Cotton seed<br>• >> Ground nut<br>• >> Soya bean …etc.<br>• cake |
| Policies and procedures | May include but not limited to:<br>• Work activities are carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements and industrial awards and agreements |
| Legislative requirements | May include but not limited to:<br>• legislative and licensing requirements<br>• Therapeutic Goods Act<br>• weights and measures legislation<br>• legislation relating to OHS, environmental management, equal opportunity and affirmative action, industrial awards and agreements |
| Extraction process | May include but not limited to:<br>• Mechanical press and Solvent extraction |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge in:<br>• prepare the extraction process for operation, including following line clearance procedures<br>• load materials and solvents to maximize extract collection<br>• monitor the extraction process<br>• Maintain all necessary records. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and principles of each stage of the extraction process, including the effect of herb density on filtration and packing process required for different types of herbs<br>• basic operating principles of equipment, including main equipment components and equipment operating capacities and applications<br>• quality requirements of materials and the effect of variation on the extraction process<br>• process specifications, procedures and operating parameters for different products/materials<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the extraction process, such as inspecting, measuring and testing as required by the process, and the ability to calculate yields<br>• contamination/food safety risks associated with the extraction process<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls, including the risks involved with the use of solvents, such as hexane, and the limitations of protective clothing and equipment used<br>• extraction process shutdown and changeover procedures and responsibilities<br>• environmental issues and controls relevant to the extraction process, including waste collection and handling procedures related to the process<br>• cleaning and sanitation procedures<br>• workplace documentation and authorization procedures |
| Underpinning Skills | Demonstrates skills to:<br>• select, fit and use personal protective clothing and/or equipment<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, 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 placing sand filters/scourers in base of percolators where required |

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| | • start, operate, monitor and adjust process to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ density of herbs in percolator, including re-packing of percolator as required<br>➢ Rate/amount of solvent add.<br>➢ extract collection and yield<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• demonstrate batch/product changeovers including line clearance procedures<br>• sort, collect, treat, recycle or dispose of waste<br>• clean and sanitize equipment as required as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Bleaching Process** |
| **Unit Code** | **IND EOP2 10 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a bleaching process to remove color and from partially refined oil. This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of bleaching equipment and processes. Processes may be batch or continuous and apply to single or multiple product types. |

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

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| 3. Shut down the bleaching process | 3.1. The appropriate ***shutdown*** procedure is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to workplace information reporting requirements. |

| **Variable** | **Range** |
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| Materials | May include but not limited to:<br>• neutralized oil<br>• bleaching earth<br>• filter aid |
| Bleaching equipment | May include but not limited to:<br>• holding/storage tanks<br>• bleaching vessel<br>• pump<br>• heat exchanger<br>• filter system/Automatic filter/ |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Policies and procedures | Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements |
| Shutdown procedures | cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| **Evidence Guide** | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge in:<br>• conduct pre-start checks on machinery used for bleaching oil products<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of the bleaching process |

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

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| | • conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, confirming availability of tank space, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for bleaching process 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<br>• start, operate, monitor and adjust bleaching process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ time/temperature<br>➢ contact time and agitation<br>➢ air contact<br>➢ product quality<br>• monitor supply and flow of materials to and from the bleaching process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take bleaching process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
|---|---|
| **Unit Title** | **Operate a Soap Splitting Process** |
| **Unit Code** | **IND EOP2 11 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a soap splitting process. This may also be referred to as an acid oil process. It covers the splitting of soap stock into an acid oil stream and an acid water stream.<br>This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of a soap splitting process. |

| Elements | Performance Criteria |
|---|---|
| 1. Prepare the equipment and soap splitting process for operation | 1.1. Materials and ***services*** are confirmed and available to meet operating requirements.<br>1.2. Machine components are adjusted to meet operating requirements.<br>1.3. Processing/operating parameters are entered as required to meet safety and production requirements.<br>1.4. ***Soap splitting/acidification equipment*** performance is checked and adjusted as required.<br>1.5. Pre-start checks are carried out as required by workplace requirements. |
| 2. Operate and monitor the soap splitting process | 2.1. The process is started and operated according to workplace procedures.<br>2.2. ***Operation of equipment and processes*** is monitored to identify variation in operating conditions.<br>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements.<br>2.4. The process is monitored to confirm separation of acid oil and acid water streams.<br>2.5. The work area is maintained according to housekeeping standards.<br>2.6. Work is conducted in accordance with workplace environmental guidelines.<br>2.7. Workplace records are maintained according to workplace recording requirements. |
| 3. Shut down the soap splitting process | 3.1. The appropriate shutdown procedure is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to workplace reporting requirements. |

| Variable | Range |
|---|---|
| Services | May include but not limited to:<br>• Power ,Acid<br>• steam<br>• water<br>• compressed and instrumentation air |
| Soap splitting/acidification equipment | May include but not limited to:<br>• pumps<br>• reactors<br>• acid and steam addition systems<br>• settling tanks |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge in:<br>• conduct pre-start checks on machinery used for soap splitting<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• apply food safety procedures to work practices |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of soap splitting, including an understanding of the process used to split soap stock and the end uses of each stream<br>• 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 |

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| | • services required and action to take if services are not available<br>• the flow of this process and the effect of outputs on downstream processes, including the impact of acid water pH on the performance of the effluent plant and impact of allowing 'fatty' acid water to flow downstream<br>• requirements of acid oil and acid water streams to be achieved<br>• the effect of variation in soap stock on the soap splitting process<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the production process, including the purpose and methods used to conduct relevant tests (tests typically include pH, moisture and FFA)<br>• contamination risks associated with the process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls, including hazards associated with handling hazardous substances<br>• 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<br>• isolation, lock out and tag out procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | • access workplace information to identify soap stock processing requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of soap stock, acid and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, correctly configured for processing requirements, cancelling isolation or lock outs as required, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational |

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| | • confirm service supply<br>• start, operate, monitor and adjust process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ pH and temperature of reactors<br>➢ pH and temperature of acid water<br>➢ acid addition<br>➢ tank levels<br>➢ color of acid oil<br>➢ color of acid water (minimum fatty matter in acid water stream)<br>• monitor supply and flow of materials to and from the process<br>• take corrective action in response to out-of-specification results<br>• prepare acid oil for loading and delivery<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment; pH rises and temperature drops<br>• 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<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Neutralization Process** |
| **Unit Code** | **IND EOP2 12 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a neutralization process to remove free fatty acid & impurities from crude oils.<br>This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of a neutralization process. Processes may be batch or continuous, and apply to single or multiple product types. |

| Elements | Performance Criteria |
|---|---|
| 1. Prepare the neutralization equipment and process for operation | 1.1. ***Materials*** and ***Services*** are confirmed and available to meet operating requirements.<br>1.2. Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3. production/process parameters are entered as required to meet safety and production requirements.<br>1.4. ***Neutralization equipment*** performance is checked and adjusted as required.<br>1.5. Pre-start checks are carried out as required by workplace requirements. |
| 2. Operate and monitor the neutralization process | 2.1. The process is started and operated according to workplace procedures.<br>2.2. ***Operation of equipment and processes*** is monitored to identify variation in operating conditions.<br>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to ***workplace information*** reporting requirements.<br>2.4. The process is monitored to confirm that neutralized product meets soap& free fatty acid target specifications.<br>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within Legislative specification.<br>2.6. The work area is maintained according to workplace housekeeping standards.<br>2.7. Work is conducted in accordance with workplace environmental guidelines.<br>2.8. Workplace records are maintained according to Workplace information recording requirements. |

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

| **Variable** | **Range** |
|---|---|
| Materials | May include but not limited to:<br>• crude oil<br>• Soft hot water<br>• phosphoric acid<br>• sodium hydroxide<br>• citric acid |
| Services | May include but not limited to:<br>• power<br>• steam<br>• vacuum<br>• Soft hot water<br>• compressed and instrumentation air |
| Neutralization equipment | May include but not limited to:<br>• tanks, flow meter<br>• pumps<br>• centrifugal separators& Mixer<br>• vacuum dryer<br>• chemical addition system<br>• heat exchanger |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge to:<br>• conduct pre-start checks on machinery used for neutralization<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of the neutralization process, including the type of alkali used, and the degumming process to prepare oil for neutralization& amount of water used for washing<br>• 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 parameter sensors and related feedback instrumentation<br>• services required and action to take if services are not available<br>• the flow of the neutralization process and the effect of outputs on downstream edible oils and fats processes<br>• quality characteristics to be achieved by the neutralization process<br>• quality requirements of inputs and effect of variation in oil quality on neutralization process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the neutralization process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the neutralization process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the neutralization process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the neutralization process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• neutralization process changeover procedures and responsibilities |

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| | • environmental issues and controls relevant to the neutralization process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with neutralization process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrates skills to:<br>• access workplace information to identify neutralization process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary oil, materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, confirming availability of tank space, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for neutralization process 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<br>• start, operate, monitor and adjust neutralization process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ oil temperature<br>➢ pressures<br>➢ flow rates/quantity<br>➢ chemical dosage rate<br>➢ product quality<br>• monitor supply and flow of materials to and from the neutralization process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take neutralization process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures |

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| | • clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Deodorizing Process** |
| **Unit Code** | **IND EOP2 13 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a deodorizing process to remove the disagreeable flavors and odors from product.<br>This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of deodorizing equipment and processes. Processes may be batch or continuous and apply to single or multiple product types. |

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

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| 3. Shut down the deodorizing process | 3.1. The appropriate ***shutdown*** procedure is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to Workplace information reporting requirements. |

| Variable | Range |
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| Materials | May include but not limited to:<br>• bleached and neutralized oil<br>• citric acid<br>• hydrogenated oil<br>• filter bags |
| Services | May include but not limited to:<br>• power, thermal fluid<br>• steam<br>• water<br>• vacuum<br>• compressed and instrumentation air |
| Deodorizing equipment | May include but not limited to:<br>• tanks<br>• pumps<br>• deodorizer<br>• vapor condenser<br>• steam injection system<br>• vacuum system<br>• cooling heat exchanger, Thermo puck |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge to:<br>• conduct pre-start checks on machinery used for deodorizing<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of the deodorizing process<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the deodorizing process and the effect of outputs on downstream processes<br>• quality characteristics to be achieved by the deodorizing process<br>• quality requirements of materials and effect of variation in oil quality on deodorizing process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the deodorizing process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the deodorizing process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the deodorizing process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the deodorizing process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the deodorizing process |

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| | • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with deodorizing process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrates skills to:<br>• access workplace information to identify deodorizing process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary oil, materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, confirming availability of tank space, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for deodorizing process 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<br>• start, operate, monitor and adjust deodorizing process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ time/temperature<br>➢ vacuum pressure<br>➢ steam flow/quantity<br>➢ air contact<br>➢ product quality<br>• monitor supply and flow of materials to and from the deodorizing process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take deodorizing process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• use oral communication skills/language competence to fulfill the job role as specified by the organization, including questioning, |

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| | active listening, asking for clarification and seeking advice from supervisor<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Winterization Process** |
| **Unit Code** | **IND EOP2 14 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a winterization process to remove waxes &serine from partially refined oil.<br>This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of a soap splitting process. |

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

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| 3. Shut down the winterization process | 3.1. The appropriate ***shutdown*** procedure is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to workplace information reporting requirements. |

| **Variable** | **Range** |
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| Materials | May include but not limited to:<br>• bleached oil<br>• filter aid<br>• filter cloths<br>• papers and/or bags |
| Services | May include but not limited to:<br>• power<br>• steam<br>• vacuum<br>• water<br>• compressed and instrumentation air |
| Winterization equipment | May include but not limited to:<br>• tanks<br>• pumps<br>• chilling unit<br>• winterizing vessel<br>• filtration equipment<br>• filter aid addition system |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge to:<br>• conduct pre-start checks on machinery used for winterization<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of the winterization process<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the winterization process and the effect of outputs on downstream processes<br>• quality characteristics to be achieved by the winterization process<br>• quality requirements of oil to be winterized and effect of variation on winterization process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the winterization process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the winterization process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the winterization process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the winterization process, including waste/rework collection and handling procedures related to the process |

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| | • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with winterization process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrates skills to:<br>• access workplace information to identify winterization process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary oil, materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, confirming availability of tank storage space, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for winterization process 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<br>• start, operate, monitor and adjust winterization process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ temperature<br>➢ vacuum<br>➢ flow rates<br>➢ tank levels<br>➢ filter aid addition<br>➢ product quality<br>• monitor supply and flow of materials to and from the winterization process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take winterization process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures |

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| | • 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Hydrogenation Process** |
| **Unit Code** | **IND EOP2 15 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a hydrogenation process to improve the hardness (conversion of unsaturated to saturated compound), viscosity, flavor and shelf-life of oils. This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of a hydrogenation process. Processes may be batch or continuous, and apply to single or multiple product types. |

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

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| 3. Shut down the hydrogenation process | 3.1. The appropriate ***shutdown*** procedure is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to Workplace information reporting requirements. |

| **Variable** | **Range** |
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| Materials | May include but not limited to:<br>• neutralized and bleached oils<br>• catalyst<br>• hydrogen<br>• filter aid<br>• filter papers<br>• cloths |
| Services | May include but not limited to:<br>• power<br>• steam<br>• vacuum<br>• water<br>• compressed and instrumentation air |
| Hydrogenation equipment | May include but not limited to:<br>• tanks<br>• pumps<br>• hydrogenation autoclave (reactor)& cooler<br>• vacuum system<br>• hydrogen supply system<br>• filtration system<br>• heat exchangers |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Policies and procedures | Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements |
| Shutdown procedures | cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |
| Legislative requirements | May include but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge to:<br>• conduct pre-start checks on machinery used for hydrogenation<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of the hydrogenation process, including a basic understanding of the chemical structure of oil and the effect of hydrogenation on this structure<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the hydrogenation process and the effect of outputs on downstream edible oils and fats processes<br>• quality characteristics to be achieved by the hydrogenation process<br>• quality requirements of oil, catalyst and filter aid as used and effect of variation on hydrogenation process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the hydrogenation process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the hydrogenation process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the hydrogenation process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls, including an understanding of the hazards associated with the use of hydrogen<br>• requirements of different shutdowns as appropriate to the hydrogenation process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities |

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| | • procedures and responsibility for reporting production and performance information<br>• hydrogenation process changeover procedures and responsibilities<br>• environmental issues and controls relevant to the hydrogenation process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with hydrogenation process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrates skills to:<br>• access workplace information to identify hydrogenation process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, confirming availability of tank space, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for hydrogenation process 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<br>• start, operate, monitor and adjust hydrogenation process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ oil temperature<br>➢ vacuum pressure<br>➢ hydrogenation quantity and agitation<br>➢ reaction rates<br>➢ flow rates/quantity<br>➢ air contact<br>➢ product quality<br>• monitor supply and flow of materials to and from the hydrogenation process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take hydrogenation process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility |

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| | • demonstrate batch/product changeovers as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate an Interesterification Process** |
| **Unit Code** | **IND EOP2 16 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down an interesterification process to rearrange the chemical composition of oil molecules. This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of an interesterification process. Processes may be batch or semi-continuous or continuous and apply to single or multiple product types. |

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

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| 3. Shut down the interesterificati on process | 3.1. The appropriate ***shutdown*** procedure is identified.<br>3.2. The process is shut down according to workplace procedures.<br>3.3. Maintenance requirements are identified and reported according to Workplace information reporting requirements. |

| **Variable** | **Range** |
|---|---|
| Materials | May include but not limited to:<br>• catalyst<br>• wash water |
| Services | May include but not limited to:<br>• power<br>• steam<br>• vacuum<br>• water<br>• compressed and instrumentation air |
| Interesterification equipment | May include but not limited to:<br>• tanks<br>• reactor<br>• washing/drying vessel<br>• pumps<br>• filter system<br>• Separators (centrifuges) may also be used to separate oil from wash water |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge to:<br>• conduct pre-start checks on machinery used for interesterification<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of the interesterification process, including a basic understanding of the chemical structure of oil and the effect of interesterification on this structure<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the interesterification process and the effect of outputs on downstream edible fats and oils processes<br>• quality characteristics to be achieved by the interesterification process<br>• quality requirements of materials and effect of variation on interesterification process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the interesterification process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the interesterification process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the interesterification process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the interesterification process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities |

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| | • procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the interesterification process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with the interesterification process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrates skills to:<br>• access workplace information to identify interesterification process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary oil, materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, confirming availability of tank space, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for interesterification process 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<br>• start, operate, monitor and adjust interesterification process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ time/temperature<br>➢ moisture content<br>➢ flow rates/quantity<br>➢ contact time and agitation<br>➢ color and soap content of the oil<br>➢ product quality<br>➢ material faults<br>➢ equipment and service faults<br>• monitor supply and flow of materials to and from the interesterification process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take interesterification process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility |

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| | • demonstrate batch/product changeovers as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Fractionation Process** |
| **Unit Code** | **IND EOP2 17 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down the fractionation process to separate edible oils into two or more liquid and solid parts, each with distinct physical and chemical properties.<br>This unit has application in an edible oils production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of a fractionation process. Processes may be batch or continuous, and apply to single or multiple product types. |

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

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| 3. Shut down the fractionation process | 3.1 The appropriate ***shutdown*** procedure is identified.<br>3.2 The process is shut down according to workplace procedures.<br>3.3 Maintenance requirements are identified and reported according to Workplace information reporting requirements. |

| **Variable** | **Range** |
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| Materials | May include but not limited to:<br>• crude tallow<br>• detergent |
| Services | May include but not limited to:<br>• power<br>• steam<br>• vacuum<br>• water<br>• compressed and instrumentation air |
| Fractionation equipment | May include but not limited to:<br>• tanks<br>• crystallization/seeder vessel<br>• separators<br>• pumps<br>• heat exchanger |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Fractionation methods | May include but not limited to:<br>• dry, solvent and detergent-based processes |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |

| Evidence Guide | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge to:<br>• conduct pre-start checks on machinery used for fractionation<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• apply food safety procedures to work practices |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• purpose and basic principles of the fractionation process, including a basic understanding of the chemical structure of oil and the effect of fractionation on this structure<br>• 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<br>• services required and action to take if services are not available<br>• the flow of the fractionation process and the effect of outputs on downstream processes<br>• quality characteristics to be achieved by the fractionation process<br>• quality requirements of oil for fractionation and effect of variation on fractionation process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the fractionation process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the fractionation process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the fractionation process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the fractionation process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage<br>• isolation, lock out and tag out procedures and responsibilities<br>• product/process changeover procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the fractionation process |

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| | • basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with fractionation process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrates skills to:<br>• access workplace information to identify fractionation process requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary oil, materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, confirming availability of tank space, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for fractionation process 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<br>• start, operate, monitor and adjust fractionation process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ time/temperature<br>➢ flow rates<br>➢ vacuum and product quality<br>• monitor supply and flow of materials to and from the fractionation process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take fractionation process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/product changeovers as required<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanitize equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |

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| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate Margarine and Vegetable Ghee Production Process** |
| **Unit Code** | **IND EOP2 18 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to, prepare margarine and vegetable ghee and operate adjust and shut down the margarine and vegetable ghee production process. |

| Elements | Performance Criteria |
|---|---|
| 1. Prepare Material& Ingredients | 1.1 Material are identified and transferred to meet production requirements.<br>1.2 Different iingredients for addition and ***services*** are confirmed and available in required quantities.<br>1.3 Ingredients are added to ***oil phase***& water phase separetely to meet recipe specifications. |
| 2. Prepare margarine/v.ghee equipment for operation | 2.1 Materials are made available to meet operating requirements.<br>2.2 Cleaning and maintenance requirements and status are identified and confirmed.<br>2.3 Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>2.4 Processing/operating parameters are entered as required to meet safety and production requirements.<br>2.5 ***Equipment*** performance is checked and adjusted as required.<br>2.6 Pre-start checks are carried out as required by workplace requirements. |
| 3. Operate and monitor the Margarine/v.ghee process | 3.1 The process is started and operated according to workplace ***policies and procedures***.<br>3.2 ***Operation of equipment and processes*** is monitored to identify variation in operating conditions.<br>3.3 Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements.<br>3.4 The process is monitored to confirm that specifications are met.<br>3.5 Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification.<br>3.6 The work area is maintained according to housekeeping standards.<br>3.7 Work is conducted in accordance with workplace environmental guidelines.<br>3.8 Workplace records are maintained according to workplace recording requirements. |

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| 4. Shut down the margarine/v.g hee process | 4.1 The appropriate ***shutdown*** procedure is identified.<br>4.2 The process is shut down according to workplace procedures.<br>4.3 Maintenance requirements are identified and reported according to workplace reporting requirements. |

| **Variable** | **Range** |
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| Services | May include but not limited to:<br>• power<br>• steam<br>• refrigeration<br>• sterilized water<br>• compressed and instrumentation air |
| Material for margarine | May include but not limited to:<br>• oil<br>• Hydrogenated oil<br>• water<br>• Lecithin<br>• Sorbic acid<br>• BHT<br>• Colorants<br>• Vitamins |
| Materials for ghee | May include but not limited to:<br>• Oil<br>• Hydrogenated oil<br>• Ingredients/if necessary/ |
| equipment | May include but not limited to:<br>• tanks<br>• heat exchangers<br>• ingredient addition systems<br>• Uv-sterilizer<br>• refrigeration system<br>• Emulsifier drum |
| Policies and procedures | May include but not limited to:<br>• Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Legislative requirements | May include but not limited to:<br>• the Food Standards Code, including labeling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs) |

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| | • specifications/recipes<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew) |

| **Evidence Guide** | |
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| Critical Aspects of Competence | Evidence of ability to:<br>• conduct pre-start checks on machinery used for margarine/v.ghee preparation<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment<br>• Apply food safety procedures to work practices. |
| Underpinning Knowledge and Attitudes | • principles of forming a water in oil emulsion, including an understanding of the types of emulsifiers used<br>• Purpose and basic principles of the margarine/v.ghee process.<br>• 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<br>• services required and action to take if services are not available<br>• the flow of margarine/v.ghee process and the effect of outputs on downstream processes<br>• quality characteristics to be achieved by each stage (oil phase, water phase and refrigeration/margarine process)<br>• quality requirements of material used and effect of variation on process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the production process, such as inspecting, measuring and testing as required by the process<br>• inspection or test points (control points) in the process and the related procedures and recording requirements<br>• contamination/food safety risks associated with the process and related control measures, including the risk of cross-contamination where tempered product mixes with untendered product |

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| | • common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls.<br>• product/process changeover procedures and responsibilities<br>• 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<br>• isolation, lock out and tag out procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process and procedures for containing spills<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• sampling and testing associated with process monitoring and control where relevant<br>• routine maintenance procedures where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrate skills to:<br>• access workplace information to identify oil and emulsion phase preparation requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary materials and services<br>• prepare oil and water phase according to procedures<br>• prepare emulsion according to procedures<br>• conduct pre-start checks on 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 valves and sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational<br>• start, operate, monitor and adjust process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, such as:<br>➢ operation of addition/dosing equipment<br>➢ Agitator speed<br>➢ emulsion temperature<br>➢ margarine/v.ghee texture<br>➢ moisture level<br>➢ margarine /v.ghee output speed<br>• monitor supply and flow of materials to and from the process<br>• take corrective action in response to out-of-specification results<br>• demonstrate batch/product changeovers |

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| | • respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• 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<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• collect samples and conduct tests according to enterprise procedures<br>• conduct routine maintenance according to enterprise procedures<br>• clean and sanities equipment according to enterprise procedures<br>• 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Operate a Packaging Process** |
| **Unit Code** | **IND EOP2 19 0613** |
| **Unit Descriptor** | This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a packaging process or sub-system process. |

| Elements | Performance Criteria |
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| 1. Prepare the equipment and process for operation | 1.1 ***Packaging*** components/consumables, ***materials*** and items to be packaged are confirmed and available to meet operating requirements.<br>1.2 Cleaning and maintenance requirements and status are identified and confirmed.<br>1.3 Machine components and related attachments are fitted and adjusted to meet operating requirements.<br>1.4 Operation of equipment and processes parameters are entered as required to meet safety and production requirements.<br>1.5 Materials, product and packaging components/consumables are loaded or positioned as required to meet packaging requirements.<br>1.6 ***Equipment*** performance is checked and adjusted as required.<br>1.7 Pre-start checks are carried out as required by workplace requirements. |
| 2. Operate and monitor the process | 2.1 The process is started and operated according to workplaceprocedures.<br>2.2 ***Operation of equipment and processes***is monitored to identify variation in operating conditions.<br>2.3 Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements.<br>2.4 The process is monitored to confirm that specifications are met.<br>2.5 Out-of-specification process outcomes are identified, rectified and/or reported to maintain the process within specification.<br>2.6 The work area is maintained according to housekeeping standards.<br>2.7 Work is conducted in accordance with workplaceenvironmental guidelines.<br>2.8 Workplace records are maintained according to workplace recording requirements. |
| 3. Shut down the process | 3.1 The appropriate ***shutdown*** procedure is identified.<br>3.2 The process is shut down according to workplace procedures.<br>3.3 Maintenance requirements are identified and reported according to workplace reporting requirements. |

| Variable | Range |
|---|---|
| Packaging | May include but not limited to:<br>• vacuum packing<br>• Modified Atmosphere Packaging (MAP)<br>• blister packaging or over wrapping |
| Materilas & finished product | packaging materials may include<br>• Bottles Pet, plastic pouch<br>• can<br>• plastic cans<br>• Refined edible oil<br>• Margarine & vegetable ghee |
| Equipment | May include but not limited to:<br>• conveyor systems<br>• filling<br>• sealing<br>• wrapping<br>• thermo-form equipment<br>• case packers<br>• bundlers<br>• ink jet coders<br>• labellers<br>• palletisers<br>• shrink wrappers<br>• strappers |
| Operation of equipment and processes | May include but not limited to:<br>• the use of process control panels and systems |
| Shutdown procedures | May include but not limited to:<br>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew |
| Policies and procedures | May include but not limited to:<br>• 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 but not limited to:<br>• the Food Standards Code, including labelling, weights and measures legislation<br>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity |
| Workplace information | May include but not limited to:<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• production schedules and instructions<br>• manufacturers' advice<br>• standard forms and reports |

| Evidence Guide | |
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| Critical Aspects of Competence | Must confirm appropriate knowledge and skills to:<br>• conduct pre-start checks on machinery used for packing<br>• start, operate, monitor and adjust process equipment to achieve required quality outcomes<br>• take corrective action in response to typical faults and inconsistencies<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• safely shut down equipment and apply food safety procedures |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:<br>• purpose and basic principles of the packaging process, including the purpose and characteristics required of packaging materials used and the principles of the packaging process used (where methods involve vacuum or map packaging, it includes an understanding of the effect of modified atmosphere on product shelf-life)<br>• product and packaging coding requirements and related legal requirements, including product weight<br>• 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<br>• services required and action to take if services are not available<br>• the flow of processes supplying the packaging process and the effect of outputs on downstream processes<br>• quality characteristics required of the packaging process, such as seal integrity requirements<br>• effect of variation in inputs, such as packaging components/consumables, materials and/or services, on process performance<br>• operating requirements and parameters and corrective action required where operation is outside specified operating parameters, including restart procedures following a crash or jam up<br>• typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems<br>• methods used to monitor the packaging process, such as visual inspecting, and measuring and testing as required by the process<br>• inspection or test points (control points) in the process and the related procedures and recording requirements<br>• contamination/food safety risks related to stages in the packaging process and related control measures<br>• common causes of variation and corrective action required<br>• Occupational Health and Safety (OHS) hazards and controls<br>• requirements of different shutdowns as appropriate to the packaging process, including emergency and routine shutdowns and procedures to follow in the event of a power outage, and conducting basic equipment referencing where required |

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| | • product/packaging changeover procedures and responsibilities<br>• isolation, lock out and tag out procedures and responsibilities<br>• procedures and responsibility for reporting production and performance information<br>• environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process<br>• basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment<br>• routine maintenance procedures where relevant<br>• packaging integrity testing where relevant<br>• cleaning and sanitation procedures where relevant |
| Underpinning Skills | Demonstrate skills to:<br>• access workplace information to identify packaging requirements<br>• select, fit and use personal protective clothing and/or equipment<br>• confirm supply of necessary packaging components/consumables, materials and services<br>• conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, setting coders and printers, selecting appropriate equipment settings and/or related parameters, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for packaging requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been completed, and confirming that all safety guards are in place and operational<br>• start, operate, monitor and adjust packaging equipment to achieve required outcomes., such as packaging components/consumables and/or product, and monitoring control points (e.g. weights, codes, placement, glue temperatures, alignment and appearance, configuration and seal integrity) as required to confirm process remains within specification<br>• monitor supply and flow of materials to and from the process<br>• take corrective action in response to out-of-specification results<br>• respond to and/or report equipment failure within level of responsibility<br>• locate emergency stop functions on equipment<br>• follow isolation and lock out/tag out procedures as required to take packaging equipment off-line in preparation for cleaning and/or maintenance within level of responsibility<br>• demonstrate batch/process changeovers<br>• complete workplace records as required<br>• maintain work area to meet housekeeping standards<br>• use process control systems according to enterprise procedures<br>• integrity testing of packaging according to enterprise procedures<br>• carry out routine maintenance according to enterprise procedures<br>• clean and sanitise equipment according to enterprise procedures |

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| | • 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<br>• work cooperatively within a culturally diverse workforce |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Implement the Food Safety Program and Procedures** |
| **Unit Code** | **IND EOP2 20 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.<br>1.2. Food handling is carried out according to the ***food safety program***.<br>1.3. ***Food safety hazards*** are controlled as required by the food safety program.<br>1.4. Where food safety control requirements are not met, the incident is promptly reported and corrective action is taken.<br>1.5. Food safety information is recorded to meet requirements of the food safety program.<br>1.6. The ***Workplace information*** is maintained in a clean and tidy order to meet workplace standards.<br>1.7. Work is conducted in accordance with workplace environmental guidelines.<br>1.8 Products/materials are handled as required by food safety program. |
| 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.<br>2.2. Processes, practices or conditions which could result in a ***food safety breach*** are identified and reported according to workplace reporting requirements.<br>2.3 Corrective action is taken in accordance with the food safety program.<br>2.4. Food safety issues are raised with designated personnel. |
| 3. Comply with personal hygiene standards | 3.1. Personal ***hygiene*** have been met the requirements of the food safety program.<br>3.2. ***Health conditions and/or illness*** are reported as required by the food safety program.<br>3.3. ***Clothing and footwear*** worn are made appropriate for the food handling task and meets the requirements of the food safety program. |

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| | 3.4. Movement around the workplace are complied with the food safety program. |

| Variable | Range |
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| Food handling | May include but not limited to:<br>• food receipt and storage<br>• food preparation<br>• cooking, holding, cooling, chilling and reheating<br>• packaging, disposal |
| Food safety program | May include but not limited to:<br>• 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 have 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 but not limited to:<br>• 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 but not limited to:<br>• food safety program<br>• Standard Operating Procedures (SOPs)<br>• specifications<br>• log sheets<br>• written or verbal instruction |
| Monitoring | May include but not limited to:<br>• taking temperatures<br>• collecting samples<br>• conducting visual inspections<br>• conducting other tests as required |
| Food safety breach | May include but not limited to:<br>• failure to check delivery temperatures of potentially hazardous chilled food<br>• failure to place temperature-sensitive food in temperature controlled storage conditions promptly<br>• failure to wash hands when required<br>• use of cloths for unsuitable purposes |
| Hygiene | May include but not limited to:<br>• Minimum personal hygiene requirements are specified on the food safety program |
| Health conditions and illnesses | May include but not limited to:<br>• Reporting of health conditions and illnesses requirements are specified by the food safety program |

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| Clothing and footwear | Examples of clothing designed to prevent contamination by the body include:<br>• purpose designed overalls or uniforms<br>• hair-nets<br>• beard snoods<br>• gloves and overshoes |
| Products**/**materials handled and stored | May include but not limited to:<br>• raw materials<br>• ingredients<br>• consumables<br>• part-processed product<br>• finished product and cleaning materials |
| Responsibility for monitoring food safety | 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** | |
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| Critical Aspects of competence | A candidate must demonstrate the ability to:<br>• identify own responsibilities with regard to food safety<br>• identify food safety risks in the workplace and the control measures used to manage them<br>• apply control measures in own work<br>• monitor compliance with food safety standards<br>• identify and act on non-compliances and participate in improving safety<br>• maintain required standards of personal hygiene<br>• complete workplace records as required<br>• apply safe work practices and identify OHS hazards and controls<br>• Apply food safety procedures. |
| Underpinning Knowledge | Demonstrate Knowledge of:<br>• sources of information and expertise on procedures and responsibilities for food safety relating to own work<br>• 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<br>• 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<br>• awareness of common microbiological, physical and chemical hazards related to the foods handled in the work area, including |

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| | the types of hazards likely to occur, the conditions under which they occur, possible consequences and control methods to prevent occurrence<br>• the properties, handling and storage requirements of ingredients, materials and products handled and used<br>• suitable standard for materials, measuring devices, equipment and utensils used in the work area<br>• food safety requirements related to work responsibilities, including personal hygiene, requirements and procedures to report illness and safe food handling practices for own work<br>• 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<br>• action required in the event of non-compliance (corrective action is typically described in the food safety program and/or related workplace information)<br>• purpose of keeping records and the recording requirements of the food safety program<br>• methods used in the workplace to isolate or quarantine food which may be unsafe<br>• product and ingredient traceability procedures, such as product recall where required by work responsibilities<br>• clothing and footwear requirements for working in and/or moving between food handling areas<br>• personal clothing maintenance, laundering and storage requirements<br>• appropriate bandages and dressings to be used when undertaking food handling<br>• housekeeping requirements and responsibilities relating to own work, and use and storage of housekeeping/cleaning equipment where relevant<br>• procedures to follow in the event of pest sighting or discovery of infestation<br>• purpose and importance of cleaning and sanitation procedures<br>• waste collection, recycling and handling procedures relevant to own work responsibilities<br>• cleaning and sanitation procedures where relevant<br>• impact of rework handling/addition on food safety where relevant<br>• sampling and test methods where relevant |
| 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
|---|---|
| **Unit Title** | **Participate in Workplace Communication** |
| **Unit Code** | **IND EOP2 21 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***.<br>1.2 Effective questioning , active listening and speaking skills are used to gather and convey information.<br>1.3 Appropriate ***medium*** is used to transfer information and ideas.<br>1.4 Appropriate non- verbal communication is used.<br>1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed.<br>1.6 Defined workplace procedures for the location and ***storage*** of information are used.<br>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.<br>2.2 Own opinions are clearly expressed and those of others are listened to without interruption.<br>2.3 Meeting inputs are made consistent with the meeting purpose and ***protocols*** established.<br>2.4 ***Workplace interactions*** are conducted in a courteous manner.<br>2.5 Questions about simple routine workplace procedures and matters concerning working conditions of employment are asked and responded.<br>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.<br>3.2 Workplace data is recorded on standard workplace forms and documents.<br>3.3 Basic mathematical processes are used for routine calculations<br>3.4 Errors in recording information on forms/ documents are identified and properly acted upon<br>3.5 Reporting requirements to supervisor are completed according to organizational guidelines. |

| Variable | Range |
|---|---|
| Appropriate sources | May include but not limited to:<br>• Team members<br>• Suppliers<br>• Trade personnel<br>• Local government<br>• Industry bodies |
| Medium | May include but not limited to:<br>• Memorandum<br>• Circular<br>• Notice<br>• Information discussion<br>• Follow-up or verbal instructions<br>• Face to face communication |
| Storage | May include but not limited to:<br>• Manual filing system<br>• Computer-based filing system |
| Protocols | May include but not limited to:<br>• Observing meeting<br>• Compliance with meeting decisions<br>• Obeying meeting instructions |
| Workplace interactions | May include but not limited to:<br>• Face to face<br>• Telephone<br>• Electronic and two way radio<br>• Written including electronic, memos, instruction and forms, non-verbal including gestures, signals, signs and diagrams |
| Forms | May include but not limited to:<br>• Personnel forms, telephone message forms, safety reports |

| Evidence Guide | |
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| Critical Aspects of Competency | Demonstrates skills and knowledge to:<br>• Prepare written communication following standard format of the organization<br>• Access information using communication equipment<br>• Make use of relevant terms as an aid to transfer information effectively<br>• Convey information effectively adopting the formal or informal communication |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:<br>• Effective communication<br>• Different modes of communication<br>• Written communication<br>• Organizational policies<br>• Communication procedures and systems |

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| | • Technology relevant to the enterprise and the individual's work responsibilities |
| Underpinning Skills | Demonstrate skills to:<br>• Follow simple spoken language<br>• Perform routine workplace duties following simple written notices<br>• Participate in workplace meetings and discussions<br>• Complete work related documents<br>• Estimate, calculate and record routine workplace measures<br>• Do basic mathematical processes of addition, subtraction, division and multiplication<br>• relate to people of social range in the workplace<br>• 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
|---|---|
| **Unit Title** | **Work in Team Environment** |
| **Unit Code** | **IND EOP2 22 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***.<br>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.<br>2.2 Roles and responsibility of other team members are identified and recognized.<br>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 are used and interactions undertaken with team members who contribute to known team activities and objectives.<br>3.2 Effective and appropriate contributions are made to complement team activities and objectives, based on individual skills and competencies and ***workplace context***.<br>3.3 Protocols are observed in reporting using standard operating procedures.<br>3.4 Contribution is made 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 | • Work activities in a team environment with enterprise or specific sector<br>• 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:<br>• Standard operating and/or other workplace procedures<br>• Job procedures<br>• Machine/equipment manufacturer's specifications and instructions<br>• Organizational or external personnel<br>• Client/supplier instructions<br>• Quality standards<br>• OHS and environmental standards |

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| Workplace context | May include but not limited to:<br>• Work procedures and practices<br>• Conditions of work environments<br>• Legislation and industrial agreements<br>• Standard work practice including the storage, safe handling and disposal of chemicals<br>• Safety, environmental, housekeeping and quality guidelines |

| **Evidence Guide** | |
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| Critical Aspects of competence | Demonstrates skills and knowledge to:<br>• Operate in a team to complete workplace activity<br>• Work effectively with others<br>• Convey information in written or oral form<br>• Select and use appropriate workplace language<br>• Follow designated work plan for the job<br>• Report outcomes |
| Underpinning Knowledge and Attitude | Demonstrate knowledge of:<br>• Communication process<br>• Team structure<br>• Team roles<br>• Group planning and decision making |
| Underpinning Skills | Demonstrate skills to:<br>• 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
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| **Unit Title** | **Develop Business Practice** |
| **Unit Code** | **IND EOP2 23 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.<br>1.2 Feasibility study is undertaken to determine likely ***business viability***.<br>1.3 Market research on product or service is undertaken.<br>1.4 Assistance is sought with feasibility study of ***specialist and relevant parties*** as required.<br>1.5 Impact of emerging or changing technology including e-commerce, on business operations is evaluated.<br>1.6 Practicability of business opportunity is assessed in line with perceived risks, returns sought and resources available.<br>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.<br>2.2 ***Personal skills/attributes*** are assessed and matched against those perceived as necessary for a particular business opportunity.<br>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.<br>3.2 Procedures are developed and documented to guide operations.<br>3.3 Financial backing is secured for business operation.<br>3.4 Business legal and regulatory requirements are identified and complied.<br>3.5 ***Human and physical resources*** required to commence business operation are determined.<br>3.6 Recruitment strategies are developed and implemented. |
| 4. Implement establishment plan | 4.1 Marketing of business operation is undertaken.<br>4.2 Physical and human resources are obtained to implement business operation. |

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

| **Variable** | **Range** |
|---|---|
| Business opportunities | May include but not limited to:<br>• expected financial viability<br>• skills of operator<br>• amount and types of finance available<br>• returns expected or required by owners<br>• likely return on investment<br>• finance required<br>• lifestyle issues |
| Business viability | May include but not limited to:<br>• opportunities available<br>• market competition<br>• timing/ cyclical considerations<br>• skills available<br>• resources available<br>• location and/ or premises available<br>• risk related to a particular business opportunity, especially<br>• in regard to Occupational Health and Safety and<br>• environmental considerations |
| Specialist and relevant parties | May include but not limited to:<br>• Chamber of commerce<br>• Financial planners and financial institution representatives, business planning specialists and marketing specialists<br>• accountants<br>• lawyers and providers of legal advice |

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| | • government agencies<br>• industry/trade associations<br>• online gateways<br>• business brokers/business consultants |
| Personal skills/attributes | May include but not limited to:<br>• technical and/ or specialist skills<br>• business knowledge and skills<br>• entrepreneurship<br>• willingness to take risks |
| Business risks | May include but not limited to:<br>• occupational health and safety and environmental<br>• considerations<br>• relevant legislative requirements<br>• security of investment<br>• market competition<br>• security of premises/ location<br>• supply and demand<br>• resources available |
| Human and physical resources | May include but not limited to:<br>• software and hardware<br>• office premises<br>• communications equipment<br>• specialist services through outsourcing, contracting and<br>• consultancy<br>• staff<br>• vehicles |
| Operational unit | May include but not limited to:<br>• office location staffed with required personnel and equipped to service and support business<br>• home-based site or other location such as leased or owned property |
| Legal documents | May include but not limited to:<br>• 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<br>• recordkeeping including personnel, financial, taxation, OHS and environmental |
| Contracts with relevant people | May include but not limited to:<br>➢ 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** | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge in:<br>• 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 |

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| | • 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 and Attitudes | Demonstrate knowledge of:<br>• 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<br>• Technical or specialist skills relevant to the business operation<br>• Financing options<br>• Business systems and operations<br>• Relevant marketing, management, sales and financial concepts<br>• Methods for researching business opportunities<br>• Principles of risk management relevant to the business<br>• Methods of identifying relevant specialist services to complement the business<br>• Forms and administrative systems<br>• Services available and charges<br>• Planning and control systems (sales,<br>• Advertising and promotion, distribution and logistics<br>• Financial recording systems<br>• Legal rights and responsibilities<br>• Record keeping duties<br>• Operational factors relating to the business (provision of professional services, products) |
| Underpinning Skills | Demonstrate skills of:<br>• Literacy skills to interpret legal requirements, company policies and procedures and immediate, day-to-day demands<br>• Marketing skills<br>• Business planning skills<br>• Entrepreneurial skills<br>• Problem-solving skills<br>• OHS skills<br>• Time management skills<br>• Belief in services and products offered by the business<br>• Communication skills including questioning, clarifying, reporting, and giving and receiving constructive feedback<br>• Technical and analytical skills to interpret business documents, reports and financial statements and projections<br>• Ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities<br>• Problem solving skills to develop contingency plans<br>• Using computers and software packages to record and manage data and to produce reports<br>• Literacy skills to enable interpretation of business information, numeracy skills for data analysis to aid research |

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| | • Research skills to identify a business opportunity and to conduct a feasibility study<br>• Analytical skills to assess personal attributes and to identify business risks<br>• 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:<br>• Interview / Written Test<br>• 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: Edible Oil Processing Level II | |
|---|---|
| **Unit Title** | **Standardize and Sustain 3S** |
| **Unit Code** | **IND EOP2 24 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.<br>1.2 Job specifications are read and interpreted following working manual.<br>1.3 ***OHS requirements***, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.<br>1.4 ***Safety equipment and tools*** are identified and checked for safe and effective operation.<br>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.<br>2.2 ***Tools and techniques*** to standardize 3S are prepared and implemented based on ***relevant procedures***.<br>2.3 Checklists are followed for standardize activities and ***reported*** to ***relevant personnel***.<br>2.4 The workplace is kept to the specified standard.<br>2.5 Problems are avoided by standardizing activities. |
| 3. Sustain 3S. | 3.1 Plan is prepared and followed to standardize 3S activities.<br>3.2 ***Tools and techniques*** to sustain 3S are discussed, prepared and implemented based on relevant procedures.<br>3.3 Workplace is inspected regularly for compliance to specified standard and sustainability of 3S techniques.<br>3.4 Workplace is cleaned up after completion of job and before commencing next job or end of shift.<br>3.5 Situations are identified where compliance to standards is unlikely and actions specified in procedures are taken.<br>3.6 Improvements are recommended to lift the level of compliance in the workplace.<br>3.7 Checklists are followed to sustain activities and reported to relevant personnel.<br>3.8 Problems are avoided by sustaining activities. |

| Variable | Range |
|---|---|
| OHS requirements | May include but not limited to:<br>• 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.<br>• Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices.<br>• Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization.<br>• 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:<br>• dust masks / goggles<br>• glove<br>• working cloth<br>• first aid<br>• safety shoes |
| Tools and equipment | May include but not limited to:<br>• paint<br>• hook<br>• sticker<br>• signboard<br>• nails<br>• shelves<br>• chip wood<br>• sponge<br>• broom<br>• pencil<br>• shadow board/ tools board |
| Tools and techniques | May include but not limited to:<br>• 5S Job Cycle Charts<br>• Visual 5S<br>• The Five Minute 5S<br>• Standardization level checklist<br>• 5S checklist<br>• The five Whys and one How approach(5W1H)<br>• Suspension<br>• Incorporation<br>• Use Elimination |

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

| **Evidence Guide** | |
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| Critical Aspects of Competence | Demonstrates skills and knowledge to:<br>• Discuss the relationship between Kaizen elements.<br>• Standardize and sustain 3S activities by applying appropriate tools and techniques. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:<br>• Elements of Kaizen<br>• Ways to improve Kaizen elements<br>• Benefits of improving kaizen elements<br>• Relationship between Kaizen elements<br>• The fourth pillar of 5S |

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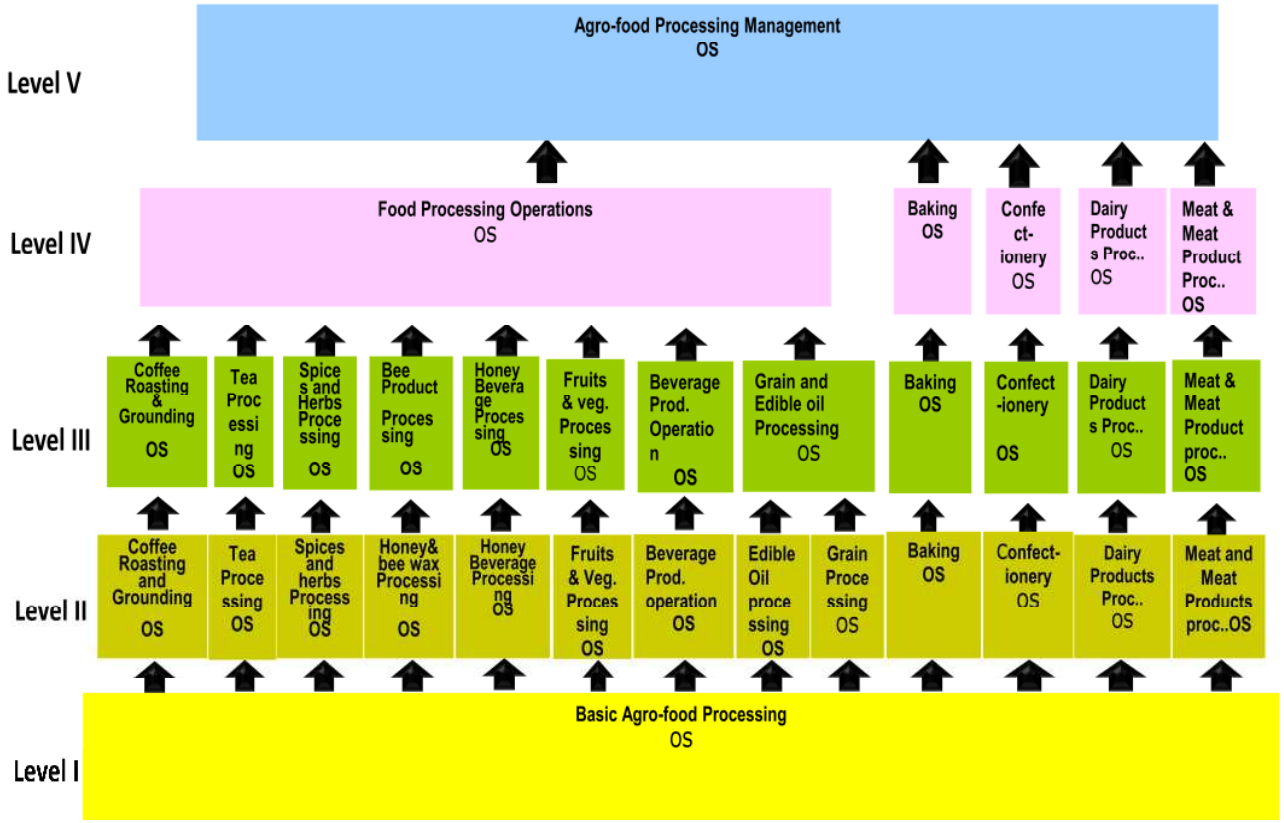
| | • Benefits of standardizing and sustaining 3S<br>• Procedures for standardizing and sustaining 3S activities<br>• Tools and techniques to sustain 3S<br>• Relevant Occupational Health and Safety (OHS) and environment requirements<br>• Plan and report<br>• Method of communication |
| Underpinning Skills | Demonstrates skills of:<br>• improving Kaizen elements by applying 5S<br>• standardizing and sustaining procedures and techniques to avoid problems<br>• technical drawing<br>• procedures to standardizing 3S activities<br>• analyzing and preparing shop layout of the workplace<br>• standardizing and sustaining checklists<br>• preparing and implementing tools and techniques to sustain 3S<br>• working with others<br>• reading and interpreting documents<br>• observing situations<br>• solving problems by applying 5S<br>• communication skills<br>• preparing labels, slogans, etc.<br>• gathering evidence by using different means<br>• using Kaizen board properly in accordance the procedure<br>• 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:<br>• Interview / Written Test<br>• 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**



## Acknowledgement

We wish to extend thanks and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the development of this occupational standard.

We would like also to express our appreciation to the Staff and Experts of Industry Ministry, Federal TVET Agency and Ministry of Education (MoE) who made the development of this occupational standard possible.

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

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**COMMENT TEMPLATE**

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