



Australian Government

Department of Education, Employment and Workplace Relations

FDFGPS2009A Operate a soap splitting process

Revision Number: 1

FDFGPS2009A Operate a soap splitting process

Modification History

Not applicable.

Unit Descriptor

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.
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Application of the Unit

Application of the unit	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.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the equipment and soap splitting process for operation	1.1. Materials are confirmed and available to meet operating requirements 1.2. Machine components are adjusted to meet operating requirements 1.3. Processing/operating parameters are entered as required to meet safety and production requirements 1.4. Equipment performance is checked and adjusted as required 1.5. Pre-start checks are carried out as required by workplace requirements
2. Operate and monitor the soap splitting process	2.1. The process is started and operated according to workplace procedures 2.2. Equipment is monitored to identify variation in operating conditions 2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements 2.4. The process is monitored to confirm separation of acid oil and acid water streams 2.5. The work area is maintained according to housekeeping standards 2.6. Work is conducted in accordance with workplace environmental guidelines 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 3.2. The process is shut down according to workplace procedures 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- access workplace information to identify soap stock processing requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of soap stock, acid and services
- 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
- confirm service supply
- 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:
 - pH and temperature of reactors
 - pH and temperature of acid water
 - acid addition
 - tank levels
 - colour of acid oil
 - colour of acid water (minimum fatty matter in acid water stream)
- monitor supply and flow of materials to and from the process
- take corrective action in response to out-of-specification results
- prepare acid oil for loading and delivery
- respond to and/or report equipment failure within level of responsibility
- locate emergency stop functions on equipment; pH rises and temperature drops
- follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- complete workplace records as required
- maintain work area to meet housekeeping standards
- use process control systems according to enterprise procedures
- conduct routine maintenance according to enterprise procedures
- clean equipment according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor

REQUIRED SKILLS AND KNOWLEDGE

- work cooperatively within a culturally diverse workforce

Required knowledge

Knowledge of:

- 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
- basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available
- the flow of 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
- requirements of acid oil and acid water streams to be achieved
- the effect of variation in soap stock on the soap splitting process
- operating requirements and parameters and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- methods used to monitor the production process, including the purpose and methods used to conduct relevant tests (tests typically include pH, moisture and FFA)
- contamination risks associated with the process and related control measures
- common causes of variation and corrective action required
- occupational health and safety (OHS) hazards and controls, including hazards associated with handling hazardous substances
- 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
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment
- routine maintenance procedures where relevant
- cleaning and sanitation procedures where relevant

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> • conduct pre-start checks on machinery used for soap splitting • start, operate, monitor and adjust process equipment to achieve required quality outcomes • take corrective action in response to typical faults and inconsistencies • complete workplace records as required • apply safe work practices and identify OHS hazards and controls • safely shut down equipment • apply food safety procedures to work practices.
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> • personal protective clothing and equipment • work procedures, including advice on safe work practices, food safety, quality and environmental requirements • information on equipment capacity and operating parameters • production schedule/batch instructions • specifications, control points and processing parameters • process and related equipment and services • materials to be processed • sampling schedules and test procedures and equipment as required • documentation and recording requirements and procedures • cleaning procedures, materials and equipment as

EVIDENCE GUIDE	
	required.
Method of assessment	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> • FDFOP2011A Conduct routine maintenance • FDFOP2013A Apply sampling procedures • FDFOP2030A Operate a process control interface • MSL973001A Perform basic tests.
Guidance information for assessment	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Policies and procedures	<p>Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements</p>
Workplace information	<p>Workplace information may include:</p> <ul style="list-style-type: none"> • standard operating procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice <p>standard forms and reports</p>
Soap splitting/acidification equipment	<p>Soap splitting/acidification equipment typically includes:</p> <ul style="list-style-type: none"> • pumps • reactors • acid and steam addition systems • settling tanks
Operation of equipment and processes	<p>Operation of equipment and processes may require:</p> <ul style="list-style-type: none"> • the use of process control panels and systems
Services	<p>Services may need to be confirmed. These depend on the nature of the process. Typical examples include:</p> <ul style="list-style-type: none"> • power • steam • water • compressed and instrumentation air

Unit Sector(s)

Unit sector	Grocery products and supplies
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		