

	<b>External Assessment Specifications Document</b>			
<b>Curriculum Code</b>	<b>Qualification Title</b>	<b>NQF Level</b>	<b>Logo</b>	
716106000	<b>Occupational Certificate: Sugar Processing Machine Operator</b>	3		
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# 1 ASSESSMENT STRATEGY

## 1.1 Assessment Model

The learner will complete a theoretical assessment at the place of work. The assessment must allow for oral assessment of learners, will include case studies and will be structured as a multiple choice assessment. Assessors who did not take part in the internal assessment process will conduct the external assessment.

## 1.2 Qualification Purpose

The purpose of this qualification is to prepare a learner to operate as an/a Sugar Processing Machine Operator

An/A Sugar Processing Machine Operator attends to the operation of equipment used in a sugar processing plant and maintains the consistent availability of processed material to required standards and volumes.

A qualified learner will be able to:

- Operate pre-set sugar processing equipment in a sugar mill
- Operate programmable sugar processing equipment in a sugar mill
- Operate a bank of interlinked equipment that functions in sequence in a sugar mill
- Perform work activities in accordance with occupational safety, health and quality requirements

## 1.3 Assessment Standards

### 1.3.1 Assessment Standards for the Qualification

#### **Integrated Assessment Focus Area 1**

Operate pre-set sugar processing equipment in a sugar mill (NQF Level 2) (20%)

#### ***Associated Assessment Criteria***

- Pre-set sugar processing equipment is inspected, started up, monitored and shut down in accordance with operating procedures
- Minor equipment of pre-set sugar processing equipment is removed and fitted to meet changes in production specifications
- Production targets and required volumes of material processed by the pre-set equipment are met to achieve factory throughput targets
- Pre-set equipment is cleaned and cared for to meet equipment functionality standards
- Knowledge of sugar processing and technology relating to the operation of pre-set equipment is applied to maintain the required operating parameters

#### **Integrated Assessment Focus Area 2**

Operate programmable sugar processing equipment in a sugar mill (NQF Level 3) (40%)

#### ***Associated Assessment Criteria***

- Programmable equipment used in the processing of sugar is inspected, started up, monitored and shut down in accordance with operating procedures

- Production targets and required volumes of material processed by the programmable equipment are met to achieve factory throughput targets
- The supply of services and utilities required for the operation of programmable equipment is monitored and problems are reported to maintain equipment functionality
- A constant flow and throughput of material is achieved in terms of required volumes and quality standards
- Knowledge of sugar processing and technology is applied during the operation, reading of instrumentation and adjustment of settings of programmable equipment to achieve the required equipment operating parameters
- Cleaning cycles of programmable equipment are initiated and their effectiveness is monitored to maintain the integrity of the processing phase and the achievement of quality standards
- Production data is collected, analysed, interpreted and presented to maintain production data recording and reporting standards

### **Integrated Assessment Focus Area 3**

Operate a bank of interlinked equipment that functions in sequence in a sugar mill (NQF Level 3) (20%)

#### ***Associated Assessment Criteria***

- A bank of equipment that functions in sequence is inspected, started up, monitored and shut down in accordance with operating procedures
- Material volumes and flow targets are met to ensure the achievement of factory throughput targets
- Knowledge of mechanical systems and sugar material handling is applied during the operation of a bank of equipment that functions in sequence to ensure factory throughput targets
- Equipment and mechanical systems are cleaned and cared for to maintain system integrity and functionality

### **Integrated Assessment Focus Area 4**

Meet occupational health, safety, environmental and quality standards (NQF Level 3) (20%)

#### ***Associated Assessment Criteria***

- Safety, health and environmental protection standards are met and potential risks are recognised and reported
- Personal protective equipment is selected, used and cared for and restrictive measures are adhered to, to minimise injuries and exposure to risks
- In-line quality samples are collected and visually inspected for compliance with set quality parameters
- Material sampling and sample handling practices are performed in accordance with prescribed procedures and traceability requirements
- Knowledge of quality control practices and systems (HACCP) is applied to meet the related standards in a sugar mill
- In-line quality tests are conducted, the results are interpreted and adjustments to equipment settings are made to minimise product re-work and risks of non-conforming product

- Quality related information from various sources (instrument/PLC readings, quality reports, sensory cues) is integrated to determine quality standards
- Laboratory quality reports are read with insight and used to make informed adjustments to the operating parameters of equipment

### **1.3.2 Assessment Standards for Phases**

None

### **1.3.3 Assessment Standards for Part Qualifications**

None

## **2 ASSIGNMENTS TO BE EVALUATED EXTERNALLY**

No assignments must be produced for external evaluation.

## **3 CRITICAL ASPECTS OF THE INTERNAL ASSESSMENTS TO BE ASSESSED EXTERNALLY**

- None

## **4 CRITERIA FOR THE REGISTRATION OF ASSESSORS**

- Experience:
  - A foreman or supervisor with expertise gained through a minimum of 5 years' work experience in a sugar mill or refinery
  - Must be a current employee at a registered assessment site or a recent employee who has not been out of the industry for more than 2 years
- Or
  - A member of the staff of a technical advisory services institute, who renders services to a sugar mill or refinery and who fits the above description
- - Context of experience:
    - Sugar milling or refining operations
- - Qualifications:
    - Sugar milling or refining operational experience

## **5 FOUNDATIONAL LEARNING**

Foundational Learning Competence is a prerequisite for access to the external integrated summative assessment.

## 6 ELIGIBILITY REQUIREMENTS FOR THE EXTERNAL ASSESSMENT

In order to qualify for the external summative assessment learners must have a copy of a completed and signed Statement of Work Experience as well as proof of successful completion of the following subjects and modules or alternative programmes where applicable.

### 6.1 Qualification

	<b><i>Proof of Knowledge Modules</i></b>			<b><i>OR</i></b>			<b><i>Proof of Alternative Programmes</i></b>	
<b><i>Number</i></b>	<b><i>Title</i></b>	<b><i>NQF Level</i></b>	<b><i>Credits</i></b>		<b><i>Number</i></b>	<b><i>Title</i></b>	<b><i>NQF Level</i></b>	<b><i>Credits</i></b>
716106000-KM-01	Occupational Safety, Health and Environmental Protection	2	4					
716106000-KM-02	Sugar processing equipment and technology	3	24					
716106000-KM-03	Basic business studies	2	4					
716106000-KM-04	Quality assurance	3	8					

	<b><i>Proof of Practical Skill Modules</i></b>			<b><i>OR</i></b>			<b><i>Proof of Alternative Programmes</i></b>	
<b><i>Number</i></b>	<b><i>Title</i></b>	<b><i>NQF Level</i></b>	<b><i>Credits</i></b>		<b><i>Number</i></b>	<b><i>Title</i></b>	<b><i>NQF Level</i></b>	<b><i>Credits</i></b>
716106000-PM-01	Operate pre-set sugar processing equipment	2	12					
716106000-PM-02	Operate programmable sugar	3	24					

	processing equipment							
716106000-PM-03	Operate a bank of interlinked equipment that functions in sequence in a sugar mill	03	8					
716106000-PM-04	Meet occupational health, safety, environmental and quality standards	03	8					

**And**

#### **Statement of Work experience**

#### **6.2 Phase 1**

#### **6.3 Part Qualification**