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## GOVERNMENT NOTICES

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### SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 676

27 June 2008



### SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

#### Mining and Minerals

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Unit Standards. The full Unit Standards can be accessed via the SAQA web-site at [www.saqqa.org.za](http://www.saqqa.org.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Unit Standards should reach SAQA at the address below and **no later than 25 July 2008**. All correspondence should be marked **Standards Setting – SGB for Mining and Minerals** and addressed to

The Director: Standards Setting and Development  
SAQA

Attention: Mr. D. Mphuthing

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Private Bag X06

Waterkloof

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DR. S. BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Take representative samples of slurries and liquids in a metallurgical process***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256596	Take representative samples of slurries and liquids in a metallurgical process		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 2	4

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9624	Take representative samples of slurries and liquids in a metallurgical process	Level 2	4	Will occur as soon as 256596 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge relating to the taking of representative samples in a metallurgical process.

**SPECIFIC OUTCOME 2**

Prepare to take representative samples.

**SPECIFIC OUTCOME 3**

Take representative samples.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Quantify analyte concentrations in prepared samples by means of Ultraviolet-Visible Spectrophotometry***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256598	Quantify analyte concentrations in prepared samples by means of Ultraviolet-Visible Spectrophotometry		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	6

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9751	Quantify analyte concentrations in prepared samples by means of Ultraviolet-Visible Spectrophotometry	Level 3	6	Will occur as soon as 256598 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to UV-Vis Spectrophotometry.

**SPECIFIC OUTCOME 3**

Quantify analyte concentration in prepared samples.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to UV-Vis Spectrophotometry.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Determine the precious metal content of an assayed sample by high temperature cupellation and weighing***

SAQA US ID	UNIT STANDARD TITLE		
256601	Determine the precious metal content of an assayed sample by high temperature cupellation and weighing		
ORIGINATOR		PROVIDER	
SGB Mining and Minerals			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	7

***This unit standard replaces:***

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9747	Determine the precious metal content of an assayed sample by high temperature cupellation and weighing	Level 3	7	Will occur as soon as 256601 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Obtain a prill by means of high temperature cupellation.

**SPECIFIC OUTCOME 3**

Quantify the precious metal content by weighing.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to high temperature cupellation and weighing.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:***Recover precious metals from a lead button by means of the cupellation process*

SAQA US ID		UNIT STANDARD TITLE	
256602		Recover precious metals from a lead button by means of the cupellation process	
ORIGINATOR		PROVIDER	
SGB Mining and Minerals			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	7

*This unit standard replaces:*

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9746	Recover precious metals from a lead button by means of the cupellation process	Level 2	7	Will occur as soon as 256602 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to the recovery of precious metals from a lead button by means of the cupellation process.

**SPECIFIC OUTCOME 3**

Recover the precious metal prill from the lead button.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to the recovery of precious metals from a lead button by means of the cupellation process.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

**Quantify analyte concentrations in prepared samples by means of Graphite  
Furnace Atomic Absorption Spectroscopy**

SAQA US ID	UNIT STANDARD TITLE		
256604	Quantify analyte concentrations in prepared samples by means of Graphite Furnace Atomic Absorption Spectroscopy		
ORIGINATOR		PROVIDER	
SGB Mining and Minerals			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	13

**This unit standard replaces:**

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9750	Quantify analyte concentrations in prepared samples by means of Graphite Furnace Atomic Absorption Spectroscopy	Level 4	3	Will occur as soon as 256604 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to Graphite Furnace Atomic Absorption Spectroscopy.

**SPECIFIC OUTCOME 3**

Quantify analyte concentration in prepared samples.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to Graphite Furnace Atomic Absorption Spectroscopy.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None





## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Maintain stock levels of equipment, reagents and consumables required by the laboratory***

SAQA US ID	UNIT STANDARD TITLE		
256605	Maintain stock levels of equipment, reagents and consumables required by the laboratory		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	12

***This unit standard replaces:***

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110421	Maintain stock levels of equipment, reagents and consumables required by the laboratory	Level 4	12	Will occur as soon as 256605 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health and safety in the work environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to the maintenance of stock levels.

**SPECIFIC OUTCOME 3**

Maintain required levels of stock.

**SPECIFIC OUTCOME 4**

Deal with problems relating to maintaining stock levels of equipment, reagents and consumables.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Quantify analyte concentrations in samples by means of X-Ray Fluorescence Spectrometry***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256615	Quantify analyte concentrations in samples by means of X-Ray Fluorescence Spectrometry		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	9

***This unit standard replaces:***

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9749	Quantify analyte concentrations in samples by means of X-Ray Fluorescence Spectrometry	Level 4	9	Will occur as soon as 256615 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Prepare samples for quantitative X-ray Fluorescence analysis.

**SPECIFIC OUTCOME 3**

Quantify analyte concentration in prepared samples.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to ICP-OES.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Determine the pH of a liquid by means of a pH meter*

SAQA US ID	UNIT STANDARD TITLE		
256617	Determine the pH of a liquid by means of a pH meter		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	2

*This unit standard replaces:*

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9636	Determine the pH of a liquid by means of a pH meter	Level 3	2	Will occur as soon as 256617 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health and safety in the work environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to pH determination.

**SPECIFIC OUTCOME 3**

Determine the pH of a liquid.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to pH determination.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Quantify analyte concentrations in prepared samples by means of Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256618	Quantify analyte concentrations in prepared samples by means of Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 4	12

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9748	Quantify analyte concentrations in prepared samples by means of Inductively Coupled Plasma Optical Emission Spectrometry	Level 4	12	Will occur as soon as 256618 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to ICP-OES.

**SPECIFIC OUTCOME 3**

Quantify analyte concentration in prepared samples.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to ICP-OES.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Dissolve solid samples for analysis***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256620	Dissolve solid samples for analysis		
<b>ORIGINATOR</b>	<b>PROVIDER</b>		
SGB Mining and Minerals			
<b>FIELD</b>	<b>SUBFIELD</b>		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	5

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9742	Dissolve solid samples for analysis	Level 3	5	Will occur as soon as 256620 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to the dissolution of solid samples.

**SPECIFIC OUTCOME 3**

Dissolve solid samples.

**SPECIFIC OUTCOME 4**

Deal with problems relating to the dissolution of a solid sample.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Collect precious metals from a fluxed sample into a metal button by means of the fire assay fusion process*

SAQA US ID	UNIT STANDARD TITLE		
256622	Collect precious metals from a fluxed sample into a metal button by means of the fire assay fusion process		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	6

*This unit standard replaces:*

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9745	Collect precious metals from a fluxed sample into a metal button by means of the fire assay fusion process	Level 2	6	Will occur as soon as 256622 is registered

## SPECIFIC OUTCOME 1

Demonstrate knowledge and skills relating to occupational health, safety and the environment.

## SPECIFIC OUTCOME 2

Collect the precious metals by means of the fusion process.

## SPECIFIC OUTCOME 3

De-slag the buttons.

## SPECIFIC OUTCOME 4

Deal with problems relating to the processes.

## QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

**Quantify analyte concentrations in prepared solid samples by means of Emission Spectroscopy**

SAQA US ID	UNIT STANDARD TITLE		
256623	Quantify analyte concentrations in prepared solid samples by means of Emission Spectroscopy		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	12

**This unit standard replaces:**

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9743	Quantify analyte concentrations in prepared solid samples by means of Emission Spectroscopy	Level 4	12	Will occur as soon as 256623 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health and safety in the work environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to solid sample analysis by emission spectroscopy.

**SPECIFIC OUTCOME 3**

Quantify analyte concentration in prepared samples.

**SPECIFIC OUTCOME 4**

Deal with problems relating to emission spectroscopy.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Perform a sink-float analysis***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256625	Perform a sink-float analysis		
<b>ORIGINATOR</b>	<b>PROVIDER</b>		
SGB Mining and Minerals			
<b>FIELD</b>	<b>SUBFIELD</b>		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	5

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9741	Perform a sink-float analysis	Level 3	5	Will occur as soon as 256625 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge relating to the sink-float process.

**SPECIFIC OUTCOME 2**

Prepare for the sink-float process.

**SPECIFIC OUTCOME 3**

Perform the sink-float process.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None





## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Flux samples in preparation for the fire assay fusion*

SAQA US ID	UNIT STANDARD TITLE		
256626	Flux samples in preparation for the fire assay fusion		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	6

*This unit standard replaces:*

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9744	Flux samples in preparation for the fire assay fusion	Level 2	6	Will occur as soon as 256626 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to fluxing.

**SPECIFIC OUTCOME 3**

Flux samples in preparation for fusion.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to fluxing.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Determine the gold fineness of gold bullion by the re-inquartation and parting procedure***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256627	Determine the gold fineness of gold bullion by the re-inquartation and parting procedure		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	4

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9628	Determine the gold fineness of gold bullion by the re-inquartation and parting procedure	Level 3	4	Will occur as soon as 256627 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge relating to gold bullion analysis.

**SPECIFIC OUTCOME 2**

Prepare for the gold bullion analysis.

**SPECIFIC OUTCOME 3**

Determine the gold bullion fineness.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Quantify analyte concentrations in prepared samples by means of Flame Atomic Absorption Spectroscopy***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256628	Quantify analyte concentrations in prepared samples by means of Flame Atomic Absorption Spectroscopy		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 4	15

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9630	Quantify analyte concentrations in prepared samples by means of Flame Atomic Absorption Spectroscopy	Level 3	15	Will occur as soon as 256628 is registered

**SPECIFIC OUTCOME 1**

Demonstrate knowledge and skills relating to occupational health, safety and environment.

**SPECIFIC OUTCOME 2**

Demonstrate knowledge relating to Flame Atomic Absorption Spectroscopy.

**SPECIFIC OUTCOME 3**

Quantify analyte concentration in prepared samples.

**SPECIFIC OUTCOME 4**

Explain or deal with problems relating to Flame Atomic Absorption Spectroscopy.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

**Mining and Minerals**

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Unit Standards. The full Unit Standards can be accessed via the SAQA web-site at [www.saq.org.za](http://www.saq.org.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Unit Standards should reach SAQA at the address below and ***no later than 25 July 2008***. All correspondence should be marked **Standards Setting – SGB for Mining and Minerals** and addressed to

The Director: Standards Setting and Development  
SAQA

*Attention: Mr. D. Mphuthing*

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**DR. S. BHIKHA**

**DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Operate a friction-driven winder***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256595	Operate a friction-driven winder		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	5

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
110144	Operate a friction driven winder	Level 3	15	Will occur as soon as 256595 is registered

**SPECIFIC OUTCOME 1**

Explain specific requirements pertaining to the operation of a friction-driven winder.

**SPECIFIC OUTCOME 2**

Prepare to operate a friction-driven winder.

**SPECIFIC OUTCOME 3**

Operate a friction-driven winder.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Operate an alternating current winder*

SAQA US ID	UNIT STANDARD TITLE		
256597	Operate an alternating current winder		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	15

*This unit standard replaces:*

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110154	Operate an alternating current winder	Level 3	15	Will occur as soon as 256597 is registered

**SPECIFIC OUTCOME 1**

Explain specific requirements pertaining to the operation of an alternating current winder.

**SPECIFIC OUTCOME 2**

Prepare to operate an alternating current winder.

**SPECIFIC OUTCOME 3**

Operate an alternating current winder.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Position conveyances in a shaft by means of clutching*

SAQA US ID	UNIT STANDARD TITLE		
256600	Position conveyances in a shaft by means of clutching		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	11

*This unit standard replaces:*

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9590	Position conveyances in a shaft by means of clutching	Level 3	11	Will occur as soon as 256600 is registered

**SPECIFIC OUTCOME 1**

Explain the specific requirements regarding the clutching of a winder.

**SPECIFIC OUTCOME 2**

Prepare to clutch a winder.

**SPECIFIC OUTCOME 3**

Clutch the winder.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Operate a direct current winder***

SAQA US ID	UNIT STANDARD TITLE		
256603	Operate a direct current winder		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	15

***This unit standard replaces:***

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110165	Operate a direct current winder	Level 3	15	Will occur as soon as 256603 is registered

**SPECIFIC OUTCOME 1**

Explain specific requirements pertaining to the operation of a direct current winder.

**SPECIFIC OUTCOME 2**

Prepare to operate a direct current winder.

**SPECIFIC OUTCOME 3**

Operate a direct current winder.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None





## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Shut down a winding plant***

SAQA US ID		UNIT STANDARD TITLE	
256606		Shut down a winding plant	
ORIGINATOR		PROVIDER	
SGB Mining and Minerals			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

***This unit standard does not replace any other unit standard and is not replaced by another unit standard.***

**SPECIFIC OUTCOME 1**

Explain the specific requirements pertaining to shut down a winding plant.

**SPECIFIC OUTCOME 2**

Prepare to shut down a winding plant.

**SPECIFIC OUTCOME 3**

Shut down a winding plant.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Remove slung material from a shaft***

SAQA US ID		UNIT STANDARD TITLE	
256616		Remove slung material from a shaft	
ORIGINATOR		PROVIDER	
SGB Mining and Minerals			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
9604	Remove slung material from a shaft	Level 2	4	Will occur as soon as 256616 is registered

**SPECIFIC OUTCOME 1**

Explain specific requirements pertaining to the removal of slung material from a shaft.

**SPECIFIC OUTCOME 2**

Prepare to remove slung material from a shaft.

**SPECIFIC OUTCOME 3**

Remove slung material from a shaft.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Remove long material from a shaft conveyance***

<b>SAQA US ID</b>		<b>UNIT STANDARD TITLE</b>	
256619		Remove long material from a shaft conveyance	
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 2	3

***This unit standard does not replace any other unit standard and is not replaced by another unit standard.***

**SPECIFIC OUTCOME 1**

Explain specific requirements for the removal of long material from a shaft conveyance.

**SPECIFIC OUTCOME 2**

Prepare to remove long material from a shaft conveyance.

**SPECIFIC OUTCOME 3**

Remove long material from a shaft conveyance.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

*Sling material into a shaft*

SAQA US ID	UNIT STANDARD TITLE		
256621	Sling material into a shaft		
ORIGINATOR		PROVIDER	
SGB Mining and Minerals			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

*This unit standard replaces:*

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9603	Sling material into a shaft	Level 2	4	Will occur as soon as 256621 is registered

**SPECIFIC OUTCOME 1**

Explain the specific requirements pertaining to the slinging of material into a shaft.

**SPECIFIC OUTCOME 2**

Prepare to sling material into the shaft.

**SPECIFIC OUTCOME 3**

Sling material into a shaft.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Change a conveyance in a shaft***

<b>SAQA US ID</b>		<b>UNIT STANDARD TITLE</b>	
256624		Change a conveyance in a shaft	
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 2	2

***This unit standard does not replace any other unit standard and is not replaced by another unit standard.***

**SPECIFIC OUTCOME 1**

Explain the specific requirements for changing a conveyance in a shaft.

**SPECIFIC OUTCOME 2**

Prepare to change a conveyance in a shaft.

**SPECIFIC OUTCOME 3**

Change conveyance in a shaft.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Start and take control of a winder***

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>		
256635	Start and take control of a winder		
<b>ORIGINATOR</b>		<b>PROVIDER</b>	
SGB Mining and Minerals			
<b>FIELD</b>		<b>SUBFIELD</b>	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 3	19

***This unit standard replaces:***

<b>US ID</b>	<b>Unit Standard Title</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Replacement Status</b>
110153	Start and take control of a winder	Level 3	19	Will occur as soon as 256635 is registered

**SPECIFIC OUTCOME 1**

Explain the specific requirements pertaining to the starting and taking control of a winder.

**SPECIFIC OUTCOME 2**

Prepare to start and take control of a winder.

**SPECIFIC OUTCOME 3**

Start and take control of a winder.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:**

***Demonstrate an understanding of the functions of electrical and mechanical components on a winder***

SAQA US ID	UNIT STANDARD TITLE		
256636	Demonstrate an understanding of the functions of electrical and mechanical components on a winder		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

***This unit standard replaces:***

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110172	Demonstrate an understanding of the functions of electrical and mechanical components on a winder	Level 3	9	Will occur as soon as 256636 is registered

**SPECIFIC OUTCOME 1**

Describe the functions of electrical components on a winder.

**SPECIFIC OUTCOME 2**

Explain the functions of mechanical components on a winder.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

**UNIT STANDARD:*****Understand health and safety practices pertaining to winding operations***

SAQA US ID	UNIT STANDARD TITLE		
256637	Understand health and safety practices pertaining to winding operations		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Fabrication and Extraction		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

***This unit standard replaces:***

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
110179	Follow basic health and safety practices pertaining to winding operations	Level 3	5	Will occur as soon as 256637 is registered

**SPECIFIC OUTCOME 1**

Describe specific requirements regarding the actions to be taken in the event of operational problems.

**SPECIFIC OUTCOME 2**

Describe specific requirements regarding the action to be taken in the event of emergencies.

**SPECIFIC OUTCOME 3**

Explain the requirements regarding occupational health and safety practices in the workplace.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD**

None