

Unit ID: 1489

**Domain** METALLURGICAL PROCESSING - CORE  
**Title:** Perform basic tests as part of  
metallurgical operations

**Level: 3**

**Credits: 12**

### Purpose

This unit standard is intended for those who carry out basic tests as part of metallurgical operations. People holding credit for this unit standard are able to: Plan and prepare for performing basic tests; demonstrate knowledge relating to performing basic tests; interpret test requirements and prepare sample; perform tests on samples; and complete duties pertaining to performing basic tests.

### Special Notes

1. Entry information:

Prerequisite

- 1449 - *Comply with health, safety and environmental rules and regulations pertaining to processing operations*; or demonstrated equivalent knowledge and skills.

2. Assessment evidence may be collected from a real workplace or a simulated workplace in which processing operations are carried out.

3. "Tests" refer to calibration test and tracer test.

4. Safe working practices include day-to-day observation of safety policies and procedures and compliance with emergency procedures.

5. Specifications refer to any, or all of the following: manufacturer's specifications and recommendations, and workplace specific requirements.

6. Performance of all elements in this unit standard must comply with relevant regulatory, legislative, workplace requirements and/or manufacturers' specifications.

7. Regulations and legislation, including subsequent amendments, relevant to this unit standard may include but are not limited to the following:

- Labour Act, No. 11, 2007
- Mineral Act, No. 33, 1992
- Trade Metrology Act, No. 77. 1973
- Mine Health and Safety Regulations, 1999
- Regulations relating to the Health and Safety of employees at work, 1997 and all industry specific regulations, legislations, code of practice, or code of conduct.

### Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the

Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website [www.nta.com.na](http://www.nta.com.na).

## **Elements and Performance Criteria**

### **Element 1: Plan and prepare for performing basic tests**

#### **Performance Criteria**

- 1.1 Work instructions, including plans, quality requirements, handling procedures and operational details are obtained, explained, clarified and applied to the allocated task.
- 1.2 Safety and security requirements, including personal protective clothing, are obtained from the site safety plan, workplace policies and procedures, explained, and applied to the allocated task.
- 1.3 Specifications for performing basic tests and specified equipment are identified and their functions explained.
- 1.4 Equipment, tools, and accessories selected to carry out tasks are set up and checked for their calibration status and consistency with the requirements of the job, their usability and any faults rectified or reported prior to commencement of work.
- 1.5 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.
- 1.6 Work area is inspected and prepared according to workplace procedures.

### **Element 2: Demonstrate knowledge relating to performing basic tests**

#### **Performance Criteria**

- 2.1 The actions and conditions pertaining to a safe, healthy environment when performing basic tests are described.
- 2.2 The concepts of metrology are described.
- 2.3 The international system of units are described.

- 2.4 The importance of performing tests is described in terms of achieving specified production requirements.
- 2.5 Hazards and risks associated with the sample, preparation methods, reagents and/or equipment are identified through relevant risk assessment procedures.
- 2.6 Corrective actions, in case of sub-standard conditions and problems be encountered, are described.

### **Element 3: Interpret test requirements and prepare sample**

#### **Performance Criteria**

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 3.2 The test request to identify samples, the test method and equipment involved are reviewed and confirmed.
- 3.3 The sample description is recorded and discrepancies reported.
- 3.4 Sample is prepared in accordance with appropriate standard methods.

### **Element 4: Perform tests on samples**

#### **Performance Criteria**

- 4.1 Sample and standards to be tested are identified, prepared and weighed or measured.
- 4.2 Tests are conducted according to workplace procedures.
- 4.3 Data is recorded according to workplace procedures.
- 4.4 Calculations on data are performed as required.
- 4.5 Out of specifications or atypical results are identified and reported to appropriate personnel.
- 4.6 Equipment is shut down according to workplace procedures.

### **Element 5: Complete duties pertaining to performing basic tests**

#### **Range**

Housekeeping may include but is not limited to ensure the work area is ready for next user; remove work materials to designated locations; correctly identify waste and re-usable material; and remove waste and re-usable materials to designated locations.

#### **Performance Criteria**

- 5.1 Task-specific tools, personal protective and safety equipment, are cleaned, maintained and stored for further use according to workplace procedures.
- 5.2 Good housekeeping practices are maintained according to workplace procedures.
- 5.3 Reporting and recording requirements are met according to workplace procedures.
- 5.4 Work related documents are completed according to job requirements and workplace procedures.

## **Registration Data**

<b>Subfield:</b>	Metallurgy
<b>Date first registered:</b>	28 September 2016
<b>Date this version registered:</b>	28 September 2016
<b>Anticipated review:</b>	2021
<b>Body responsible for review:</b>	Namibia Training Authority