



Australian Government

Department of Education, Employment and Workplace Relations

SUGPFCT3A Perform factory control tests

Revision Number: 1

SUGPFCT3A Perform factory control tests

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to perform tests for factory control. These tests are typically complex and/or non-routine and require interpretation of results within broad guidelines.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for testing	1.1 Testing requirements and methods are identified 1.2 Calibration of test equipment is managed to maintain accurate equipment 1.3 Standard graphs are prepared 1.4 Test chemicals and reagents are prepared and labeled as required for laboratory requirements 1.5 Samples are prepared as required by test method 1.6 Pre-test checks are conducted and recorded according to workplace recording requirements
2. Conduct test	2.1 Conduct test in accordance with test method and test schedule 2.2 Identify and report atypical test results 2.3 Record and communicate test results as required 2.4 Follow procedures to repeat or validate results 2.5 Clean, care for and store equipment as required 2.6 Dispose of waste materials according to workplace procedure
3. Record test data in laboratory information system	3.1 Results are entered into laboratory information systems according to workplace procedure 3.2 Correct data entry errors 3.3 Store and retrieve data in the laboratory information system 3.4 Produce standard and non-standard reports from laboratory information system

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as the test regime to identify test requirements and methods
2. Select, fit and use personal protective clothing and/or equipment
3. Prepare standard graphs and standard chemicals for laboratory use
4. Manage calibration of test equipment
5. Handle chemicals safely. This includes following correct handling and preparation procedures and use of appropriate protective clothing and equipment
6. Demonstrate test procedures according to test schedule and test method
7. Identify and report any out-of-specification results
8. Communicate test results to relevant personnel
9. Maintain stocks of laboratory chemicals and materials
10. Sort, collect, treat, recycle or dispose of tested materials
11. Record information in the laboratory information system. This includes ability to enter and edit data, generate standard reports and store information
12. Maintain work area to meet housekeeping standards

Knowledge of:

13. Purpose of the test procedure. This includes a basic knowledge of chemistry and physics principles relating to the tests performed and operating principles of equipment used
14. Apply knowledge of mill operations to interpret test results. This includes identifying implications of results for mill performance
15. Awareness of legislative requirements relating to cane payment tests
16. Terminology relating to the types of tests and related methods used
17. Safe work procedures including hazards associated with specific test procedures requirements such as working with chemicals and test equipment
18. Specific test methods/procedures
19. Typical causes of out-of-specification results and procedure for repeating the analysis
20. Methods used to plot, analyse and present test data. This includes production of both standard and non-standard reports
21. Laboratory information system recording and reporting requirements. These meet legislative record keeping requirements and workplace requirements

Relationship with other standards

Pre-requisite units

The pre-requisite for this competency standard is:

- SUGPPST2A Perform standard tests

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Test equipment, chemicals and reagents and related equipment

- Materials to be tested
- Test methods and procedures
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Sample labeling and recording systems, requirements and procedures
- Laboratory recording and reporting system

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice may include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, test methods and procedures
- Equipment is defined by test method and legislative requirements
- Confirming equipment condition may include conducting calibration procedures. Calibration procedures are routine, documented procedures
- The types of tests conducted depends on the test equipment and methods used and may include but are not limited to:
- Sugar - ash, colour, dextran, filterability, reducing sugars, starch, phosphate, grist/grain size
- Molasses/massecuite/syrup - true purity by dry substance and sucrose, HPLC
- Cane/bagasse - POC, pol and brix by disintegrator method, fibre by prepared cane method
- Clarified juice or ESJ - phosphate, starch
- Mud - fibre, insolubles
- Boiler water - caustic alkalinity, phosphate, sulphate, hardness, total dissolved solids, sulphate
- Effluent - sucrose, BOD, suspended solids
- Caustic - concentration
- EDTA - concentration and activity
- Lime - sucrose soluble alkali
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.