# Project Assessment

**Assessment event 2 of 3**

## Criteria

### Unit code, name and release number

MSL933006 - Contribute to the achievement of quality objectives (1)

### Qualification/Course code, name and release number

MSL30118 - Certificate III in Laboratory Skills (1)

## Student details

### Student number

### Student name

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is my own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Version: 1.0

Date created: 13/08/2019

Date modified: 18/12/2019

For queries, please contact:

Innovative Manufacturing, Robotics and Science SkillsPoint

Hamilton Campus

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RTO Provider Number 90003 | CRICOS Provider Code: 00591E

This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your knowledge and performance as would be required to contribute to the achievement of quality objectives in the workplace |
| **Assessment Event number** | 2 of 3 |
| **Instructions for this assessment** | This is a project based assessment and will be assessing you on your knowledge and performance of the unit.  This assessment is in 3 parts and includes an Assessment Feedback form:   1. Laboratory Task Review 2. Assignment 3. Assessment Checklist   For the assignment you will need to access the Australian Standard AS ISO/IEC 17025:18 *General requirements for the competence of testing and calibration laboratories,* using the TAFE library. |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your assessor for marking. Ensure you have written your name at the bottom of each page of this assessment.  It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To achieve a satisfactory result for this assessment all questions must be answered correctly. |
| **What do I need to provide?** | Pens and pencils |
| **What the assessor will provide?** | The Assessment at least one month prior to the submission date. This allows for the completion of the laboratory task review. |
| **Due date and time allowed** | To be arranged. |
| **Assessment feedback, review or appeals** | In accordance with the TAFE NSW policy *Manage Assessment Appeals,* all students have the right to appeal an assessment decision in relation to how the assessment was conducted and the outcome of the assessment. Appeals must be lodged within **14 working days** of the formal notification of the result of the assessment.  If you would like to request a review of your results or if you have any concerns about your results, contact your Teacher or Head Teacher. If they are unavailable, contact the Student Administration Officer.  Contact your Head Teacher for the assessment appeals procedures at your college/campus. |

## Specific task instructions

The instructions and the criteria in the tasks and activities below will be used by the assessor to determine if you have satisfactorily completed this assessment event. Use these instructions as a guide to ensure you demonstrate the required knowledge.

Read the observation checklist closely to ensure you are familiar with the detail expected in the work review.

## Part 1: Laboratory Task Review

To complete this part of the assessment, you will be required to complete a laboratory task review considering how your work could be improved.

Once completed you will need to submit this assessment to your assessor for marking. A maximum of 200 words for sections requiring explanations excluding for lists/tables which will often just require short (up to 20 word) responses.

**Topic of brief:**

Over at least a two week period you are to consider all the tasks you undertake in the laboratory. In the Review of laboratory task practices table provided you need to:

1. Identify 5 tasks that you consider that could be improved in your laboratory practices (at least one of the tasks identified should look at the minimisation of waste during the process).
2. Identify the possible improvement(s) for each and indicate how this would contribute to sustainable work practices.
3. Indicate if the improvement would be in the area of procedure, process or equipment.
4. Indicate how you reported or actioned this.
5. Identify your strengths and limitations and opportunities you have for skill development.

Examples could include:

* + steps in a method (SOP) (Procedure)
  + availability of different methods (Procedure)
  + repeated non-conformity results occurring (Procedure and Process and Equipment)
  + equipment available (Equipment)
  + resources consumed (Process)
  + wastes generated (Process)
  + communication procedures to both internal and external customers (Process)
  + additional staff training (Process)
  + continual improvement (Process)

An example has been provided for you in the Review of Laboratory Work Practices table. You should have at least one entry for each of Process, Procedure and Equipment.

Once you have completed the table, review your entries and make a comment below on how this activity has helped you identify your own strengths and your limitations related to laboratory work. What opportunities are available for you to participate in skill development in the laboratory? (Up to 200 words for the Task Review Conclusions).

**Task Review Conclusions:**

Table 2 Review of laboratory practices

| Review of Laboratory Task Practices | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Date | Task | Identified Possible Improvement | Procedure | Process | Equipment | Report/Action |
| *23/9/20* | *Preparing soil sample for further analysis* | *Prior to analysis soil must be prepared by placing through a 2mm sieve. There is only one 2mm sieve available and this needs to be cleaned between samples and if wet will take time to dry. There is a lot of time waiting to prepare the samples while waiting on sieve to dry. If additional sieves were available it would be possible to prepare samples quicker and have these ready for the analyst resulting in a faster turn around time for the customer. If additional sieves were available the procedure could be modified to instruct technician to prepare the next sample when a set of sieves is drying.* | *X* | *X* | *X* | *Reported to Soil Chemist and enquiries made to purchasing officer re the cost of 5 additional 2mm sieves.* |
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## Part 2: Assignment

To complete this part of the assessment, you will be required to identify quality tools that are in use in your laboratory.

Once completed you will need to submit this assessment to your assessor for marking.

**Brief:**

Your laboratory will have in place a number of quality tools designed to ensure the results from the laboratory are the most accurate and reliable possible. Reported sample results are generally required to have been substantiated by reference to some form of quality tool.

The questions within this assignment look at these quality tools, your work and organisations that are involved in laboratory quality.

Answer the questions that follow considering your laboratory.

1. The table below identifies a number of quality tools or procedures that a laboratory may have as part of its quality management system. You are to identify within the table those that are applicable to your laboratory and say what contribution to quality they make.

Table 3 Quality tools

| Quality tool | Found in my laboratory Yes/ No |
| --- | --- |
| Standard Operating Procedure | Yes /  No |
| Equipment calibration | Yes /  No |
| Blanks | Yes /  No |
| Standard samples | Yes /  No |
| Spikes | Yes /  No |
| Replicates | Yes /  No |
| Reference samples | Yes /  No |
| Chain of custody | Yes /  No |
| Traceability | Yes /  No |
| Control charts | Yes /  No |
| HACPP | Yes /  No |
| Certification | Yes /  No |
| Audit (internal) | Yes /  No |
| Audit (external) | Yes /  No |
| Sampling plan | Yes /  No |
| Non-conformance identification | Yes /  No |
| Measurement variation | Yes /  No |
| Maintenance schedules | Yes /  No |
| Staff training | Yes /  No |
| Continuous improvement schemes | Yes /  No |
| Team meetings/toolbox talk | Yes /  No |
| Workplace ‘buddy’ system | Yes /  No |

1. For all (at least 10) of the Yes responses in question 1 above, indicate how the identified ‘tool’ contributes to the Quality of the Laboratory. If you didn’t have 10 as ‘yes’, you are to select and answer (to make up to 10) from the list of ‘No’ responses and indicate how you think these could contribute to the Quality of the Laboratory. Your responses should be no more than 50 words for each ‘quality tool’.

a.

b.

c.

d.

e.

f.

g.

h.

i.

j.

To respond to the following questions (3 & 4) you will need to research NATA and also Australian Standard AS ISO/IEC17025:18 via the TAFE Library site. The TAFE Library website will be able to provide access to the Australian Standard for your research.

1. NATA is the Australian body that is responsible for the accreditation of Australian laboratories. NATA accreditation provides an enterprise with many benefits. List five benefits of having laboratory accreditation from NATA:
2. A Laboratory in seeking NATA registration, would use Australian Standard AS ISO/IEC 17025:18 *General requirements for the competence of testing and calibration laboratories* as a guideline for its operations.

**7. Process Requirements** (of the standard) covers many features expected of a testing or calibration laboratory. Read this section of the standard and decide (list your reasons) whether your laboratory, if it applied for accreditation would meet the requirements for the following sections. If it does not meet the requirements what would be required to be compliant.

7.3 Sampling

7.7 Ensuring validity of results

7.9 Complaints

7.11 Control of data and information management

(As a guide no more than 50 words for each of the requirements)

1. Provide copies of four different laboratory tasks you have undertaken that show:
2. Results you have taken for the tasks
3. Reporting of the final results

The copies will need to be verified by your Laboratory Trainer as a true record of your work.

Complete the table below for each document provided:

Table 4 Assessment instructions

| Task | Analysis completion date | Results within specification Yes/No  Actions | Reported to |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

6. It has been identified that C:\Users\dhatton2.AD\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\SMOGARE2\AllSci.png Oven 1 has had some operational issues.

The Quality Control Team have identified a possible problem with results issued for samples analysed using Oven 1 during the period 8/02/2019 to 12/02/2019. There has been no external customer issue raised. The purpose of this investigation is to ensure that future issues are identified early and corrective action is taken.

The following are provided for you to consider and make recommendations.

* Email from the Quality Control Team to Laboratory Team Leader
* Results of Oven Temperatures for Ovens 1 and 2
* Control Charts (Oven temperatures ovens 1 and 2)
* Maintenance Records for Ovens 1 and 2

You are required to read the email from the Quality Control Team to the Laboratory Team Leader, consider the information provided and make recommendations using:

1. the Investigation Report (IRN0101)
2. the Corrective Action Report
3. email to Team Leader indicating the investigation has been completed

Internal email

|  |  |
| --- | --- |
| Email Message | |
| To | Laboratory Team Leader |
| Cc | Quality Control Manager |
| Subject | Oven 1 |
| Message:  The analysis of the reported daily values for Oven 1 has highlighted an issue during the period 8/02/2019 to 12/02/2019.  It is possible that the unstable nature of the oven during this time may have caused incorrect results to be published to customers.  Please arrange for an investigation and paperwork completion for:   1. possible causes of the oven variation not being rectified earlier 2. possible results that should be investigated further 3. corrective action to overcome future problems   Your team response is requested within 3 working days.  Regards  A Inspection  Quality Team Co-ordinator  C:\Users\dhatton2.AD\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\SMOGARE2\AllSci.png  *We respectfully acknowledge the traditional Custodians of the Country on which we learn and work together, and commit to building relationships, respect and opportunities with Aboriginal Peoples.*  The contents of this email and its attachments are confidential and intended solely for the use of the individual or entity to whom they are addressed | |

**Oven temperature Results and Control Charts for Ovens 1 and 2.**

Oven 1 Control Chart Readings Oven 1

|  |  |
| --- | --- |
| Date | Reading |
| 1/02/2019 | 104.5 |
| 2/02/2019 | 105 |
| 3/02/2019 | 105 |
| 4/02/2019 | 106 |
| 5/02/2019 | 108 |
| 6/02/2019 | 106 |
| 7/02/2019 | 105.5 |
| 8/02/2019 | 102 |
| 9/02/2019 | 101.5 |
| 10/02/2019 | 101 |
| 11/02/2019 | 100 |
| 12/02/2019 | 106 |
| 13/02/2019 | 106 |
| 14/02/2019 | 106.5 |
| 15/02/2019 | 106 |
| 16/02/2019 | 106 |
| 17/02/2019 | 105 |
| 18/02/2019 | 105 |

Oven 2 Control Chart Readings Oven 2

|  |  |
| --- | --- |
| Date | Reading |
| 1/02/2019 | 104.5 |
| 2/02/2019 | 105 |
| 3/02/2019 | 105 |
| 4/02/2019 | 106 |
| 5/02/2019 | 105 |
| 6/02/2019 | 106 |
| 7/02/2019 | 105.5 |
| 8/02/2019 | 105.5 |
| 9/02/2019 | 105 |
| 10/02/2019 | 104.5 |
| 11/02/2019 | 105 |
| 12/02/2019 | 105.5 |
| 13/02/2019 | 106 |
| 14/02/2019 | 105.5 |
| 15/02/2019 | 105.5 |
| 16/02/2019 | 106 |
| 17/02/2019 | 105 |
| 18/02/2019 | 105 |

Maintenance Records Oven 1 and 2.



**Routine Maintenance Record**

Item: Drying Oven 1

ID Number: DO12000 Acquisition Year: 2000

Frequency of maintenance: Fortnightly, unless Daily control check indicates a problem

|  |  |  |  |
| --- | --- | --- | --- |
| Date: | Routine Maintenance Outcome | Corrective action if required | Analyst |
| 1/12/2018 | Temperature check OK |  | XX |
| 15/12/2018 | Temperature check OK |  | XA |
| 29/12/2018 | Temperature check OK |  | ZR |
| 12/01/2019 | Temperature check OK |  | AX |
| 26/01/2019 | Temperature check OK |  | BT |
| 8/02/2019 | Additional check NS | Daily check identified temperature below Control limit. Thermostat adjusted to increase temperature | BT |
| 9/02/2019 | Temperature check NS | Thermostat adjusted again to increase temperature | XX |
| 12/02/2019 | Additional check NS | Electrician called to check the thermostat. Electrician changed thermostat. Oven 1 taken out of service. Additional checks required for 2 days to ensure temperature remains stable. Instrument not to go online until stability is evident. Laboratory Team Leader notified. | BT |
| 13/02/2019 | Additional check  OK | Oven appears stable | BT |
| 14/02/2019 | Additional check  OK | Oven appears stable.  Oven brought back online. | BT |
| 23/02/2019 | Temperature check OK |  | XX |
| 9/03/2019 | Temperature check OK |  | BT |
|  |  |  |  |
|  |  |  |  |



**Routine Maintenance Record**

Item: Drying Oven 2

ID Number: DO22018 Acquisition Year: 2018

Frequency of maintenance: Fortnightly, unless Daily control check indicates a problem

|  |  |  |  |
| --- | --- | --- | --- |
| Date: | Routine Maintenance Outcome | Corrective action if required | Analyst |
| 1/12/2018 | Temperature check OK |  | BT |
| 15/12/2018 | Temperature check OK |  | BT |
| 29/12/2018 | Temperature check OK |  | BT |
| 12/01/2019 | Temperature check OK |  | BT |
| 26/01/2019 | Temperature check OK |  | BT |
| 9/02/2019 | Temperature check OK |  | BT |
| 23/02/2019 | Temperature check OK |  | BT |
| 9/03/2019 | Temperature check OK |  | BT |
|  |  |  |  |
|  |  |  |  |

1. 

| INVESTIGATION REPORT | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Date |  | Enquiry Reference Number | ERN1002 | | Investigation Report Number | | IRN1002 |
| Customer complaint | | Quality Control | | External audit | | Internal Audit | |
| Staff suggestion | | Management review | | Risk Assessment | | Other \_\_\_\_\_\_\_\_\_\_\_ | |
| Results of investigation   1. Initial verification of results: 2. Possible causes of problem: 3. Sample checking | | | | | | | |
| Action to be taken:   1. Changes to be made 2. Implementation strategy | | | | | | | |
| Investigation to be reviewed by: | | | | | | | |
| Implementation of actions reviewed by:  Quality Systems Manager: Date:  Laboratory Shift Supervisors: Date:  Laboratory Personnel: Date: | | | | | | | |
| Date of final sign-off of completion: | | | | | | | |

b. 

| CORRECTIVE ACTION REPORT | | | | | |
| --- | --- | --- | --- | --- | --- |
| Date |  | Enquiry Reference Number |  | Investigation Report Number |  |
| Reason for Rectification: (Circle)  Customer complaint Quality Control External audit  Staff suggestion Risk assessment Internal audit  Proficiency testing Management review Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | |
| This report should be read in conjunction with the investigation report number identified above: | | | | | |
| Actions to be taken: | | | | | |
| Implementation will be monitored how and by whom: | | | | | |
| C:\Users\dhatton2.AD\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\SMOGARE2\AllSci.png would expect to see an improvement in: (circle those applicable)  Customer Service Productivity Efficiency  Quality Control Safety Audit outcomes | | | | | |
| Authorised by: Date: | | | | | |

c.  Email

|  |  |
| --- | --- |
| Email Message | |
| To |  |
| Cc |  |
| Subject |  |
| Message:  On behalf of C:\Users\dhatton2.AD\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\SMOGARE2\AllSci.png Laboratories  Testing Avenue  Sciencetown  *We respectfully acknowledge the traditional Custodians of the Country on which we learn and work together, and commit to building relationships, respect and opportunities with Aboriginal Peoples.*  The contents of this email and its attachments are confidential and intended solely for the use of the individual or entity to whom they are addressed | |

## Part 3: Assessment Checklist

The following checklist will be used by your assessor to mark your performance against the assessment criteria of your submitted project. Use this checklist to understand what skills and/or knowledge you need to demonstrate in your submission. All the criteria described in the Assessment Checklist must be met.

| Part | Instructions | S | U/S | Assessor Comments |
| --- | --- | --- | --- | --- |
|  |  |  |  | *Assessors are to record their observations in sufficient detail to demonstrate their judgement of the students performance against the criteria* |
| **1** | 1. Student has provided 5 examples from over a two week period |  |  |  |
| 1. Student has noted possible improvements |  |  |  |
| 1. Student has identified if the improvement is to Procedure or Process or Equipment |  |  |  |
| 1. Student has noted the actions taken for improvements suggested |  |  |  |
| 1. Student has identified their own strengths and limitations (at least one of each) and opportunities for skill development |  |  |  |
| **2** | 1. Student identifies applicable quality tools that are found in their laboratory |  |  |  |
| 1. Student has discussed 10 tools in relation to quality in the laboratory |  |  |  |
| 1. Student has provided 5 benefits of NATA accreditation |  |  |  |
| 1. Student has provided responses to 7.3, 7.7, 7.9 and 7.11 of Australian Standard as they relate to a laboratory they are familiar with |  |  |  |
| 1. Student attaches verified documents for 4 different tasks showing results collected and reporting of final results |  |  |  |
| 1. Student has responded to the operational issue and completed the Investigation and corrective action request. |  |  |  |

## Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor Feedback

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***