# Skills assessment 2

**Assessment event 5 of 6**

# Trainer & Assessor Marking Guide

## Criteria

### Unit code, name and release number

MSL974021 - Perform biological procedures (1)

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

MSL50118 - Diploma of Laboratory Technology (1)

MSL40118 - Certificate IV in Laboratory Techniques (1)

\*\*Amend the qualification box before distributing to the student. The information here should only contain the qualification the student is enrolled in\*\*

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For queries, please contact:

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Hamilton Campus

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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 |
| --- | --- |
| **Instructions for the trainer and assessor** | This is a skill based assessment and will be assessing the student on their ability to demonstrate skills required in the unit.  This assessment is in 3 parts:   1. Spectrophotometry 2. Observation Checklist 3. Assessment feedback   Assessor must determine the concentration of the control and unknown samples ahead of time as to correctly assess students.  If your site uses barcoded test tubes, the analytical method will need to be adjusted to reflect this.  Students should have correct Köhler illumination at each objective to pass this task.  If student does not have the correct technique, you may question them to determine where they went wrong. If they come up with the answer themselves, you may use your expert judgement to determine whether or not they have made competency for this assessment.  Each student prepares three slides per section. Only one slide from each section needs to meet the marking criteria.  Model answers, sample responses or criteria for each task or activity are provided below.  Use these to support your judgement when determining a satisfactory result.  The student’s response to each question must contain the information indicated in this marking guide in order for their response to be correct. However, if a student provides information other than indicated below, and in the professional opinion of the assessor it is appropriate and meets the intent of the question, it may be considered correct.  Complete the Observation Checklist for each task and activity and the Assessment Feedback to the student. Ensure you have taken a copy of the assessment prior to it being returned to the student.  The Assessment Feedback page must be signed by both the student and the assessor so the student displays that they have received, understood and accepted the feedback.  Ensure the students name appears on the bottom of each page of the submitted assessment. |
| **About this marking guide** | The student’s response to each task or activity must contain the criteria indicated in this marking guide in order for their response to be correct.  All tasks and activities must be completed correctly in order to satisfactorily complete this assessment event.  Assessors will need to make a judgement call as to whether each response meets the criteria based upon the:   * Rules of Evidence:   + Validity – does the answer address the skill required and does the evidence reflect the four dimensions of competency?   + Sufficiency – is the task or activity sufficient in terms of length and depth?   + Currency – has the work been done so recently as to be current?   + Authenticity – is this work the student’s own authentic work? * Principles of Assessment   + Fairness – individual student’s needs are considered in the assessment process   + Flexibility – assessment is flexible to the individual student   + Validity – any assessment decision is justified, based on the evidence of performance of the student   + Reliability – evidence presented for assessment is consistently interpreted and assessment results are comparable irrespective of the assessor conducting the assessment * Dimensions of competency   + Task skills   + Task Management Skills   + Contingency Planning Skills   + Job Role Environment Skills |
| **Student must provide** | Pens, pencils, appropriate clothing – long pants and sleeves, closed shoes and long hair tied back. |
| **Assessor must provide** | Laboratory  Equipment and reagents listed in the following SOPs, as well as a copy of each SOP for students to work through:   1. Standard operating procedure *M407: Protein estimation using a calibration graph* 2. *Form F410: Protein estimation worksheet*   Please note that standard operating procedures and forms will be available on Learning Bank at the start of 2020. Contact IMRS SkillsPoint if you require a copy earlier. |
| **Due date/time allowed/venue** | TBA / 3 hours / microbiology laboratory |

## Part 1: Spectrophotometry

To complete this part of the assessment, the student is required to participate in a practical demonstration of how to complete a task or activity.

These practicals will be observed by you, or the student can digitally record them and submit them as evidence.

The student’s responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria provided in the Observation Checklist to understand what skills the student is required to demonstrate in this section of the assessment. This Checklist outlines the Performance Criteria, Performance Evidence and Assessment Conditions you will be marking the student on.

Once completed the student is required to submit this assessment and the tasks and activities required to be completed to you for marking.

**Task:**

Your task is to determine the concentration of protein in an unknown sample using colourimetry.

**To complete this task, you will be provided:**

* A control sample
* An unknown sample
* Standard operating procedure *M407: Protein estimation using a calibration graph*
* Form *F410: Protein estimation worksheet*
* The materials, reagents and tools required to successfully complete this task

1. Put on the correct personal protective equipment (PPE)
2. Follow *M407: Protein estimation using a calibration graph* to complete task.
3. Complete *F410: Protein estimation worksheet*

## Part 2: Observation Checklist

The Observation Checklist will be used by you to mark the students’ performance in any of the previous three event types. Use this Checklist to understand what skills the student is required to demonstrate in this section of the assessment. This Checklist outlines the Performance Criteria, Performance Evidence and Assessment Conditions you will be marking the student on. All the criteria must be met. The student’s demonstration will be used as part of the overall evidence requirements of the unit. You may ask questions while the demonstration is taking place or if appropriate directly after the task/activity has been completed.

Table 2 Observation Checklist

| Item # | Observation | S | U/S | Assessor Comments  (Describe the student’s ability in demonstrating the required skills and knowledge) |
| --- | --- | --- | --- | --- |
| 1 | **PPE (Student must wear appropriate PPE at all times when conducting laboratory work):**   1. Correct PPE was chosen for the task | ☐ | ☐ | **Sample comment:**  Lab coat, safety glasses, closed in footwear, mask and glasses (if appropriate for the task being conducted) |
| 2 | **Protein estimation**  Student has completed the following steps:   1. Preparation of standards 2. Determination of control sample 3. Determination of unknown sample 4. Control and unknown sample are within +/- 5% of expected value 5. *F410: Protein estimation worksheet* is completed | ☐  ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐  ☐ | **Sample comment:**  Student completed preparation of the calibration standards efficiently and correctly.  Student determined the value of the control sample and it was within the required range. Student determined the value of the unknown.  Student completed worksheet as per benchmark response contained in MSL974021\_MG\_Sk\_5of6\_SR1.doc **– NOTE: this is an EXAMPLE only. Assessors must complete a graph based on the samples used and attach that to this marking guide. Use the benchmark as a guide only.** |
| 3 | **Housekeeping:**   1. Biohazardous materials are disposed of in correct bins 2. Volumetric flasks are washed and rinsed with distilled water and returned to cupboards 3. Reagents are returned to cupboards | ☐  ☐  ☐ | ☐  ☐  ☐ | **Sample comment:**  Student has placed biohazardous wastes into correct bins  Student has cleaned the volumetric flasks and returned them to cupboards  Student has returned reagents to cupboard. |