# Skills assessment 4

**Assessment event 5 of 5**

# Trainer & Assessor Marking Guide

## Criteria

### Unit code, name and release number

MSL973019 - Perform microscopic examination (1)

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

MSL50118 - Diploma of Laboratory Technology (1)

MSL40118 - Certificate IV in Laboratory Techniques (1)

MSL30118 - Certificate III in Laboratory Skills (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:

Innovative Manufacturing, Robotics and Science SkillsPoint

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. Red blood cell (RBC) count 2. Observation Checklist 3. Assessment feedback   The students should be provided with a control and an unknown red blood cell sample for this task. You will need to complete this task ahead of time to ensure you have the concentration values for the control and unknown sample, to check student results against. A sample of a completed calculation sheet is provided in MSL973019\_MG\_Sk\_5of5\_SR1, you will need to adjust the values to create benchmark responses for the samples you provide. Mark students worksheets against the version you create  **Observation checklist**  **Item 1**  The student must meet the foundation skill for numeracy, and track the sample through to reporting. Make sure they have the same sample ID on all components throughout this assessment task.  **Item 3**  You must observe the student load at least one side of the counting chamber to meet PE2.3 – in the task, the student has been asked to call you over for loading of the control sample. In practice, you could ask half of the class to call you for the control and half for the sample, to assist with better time management.  **Item 4**  Make sure students use the right numbers in the right locations.  Each student will have a slightly different answer, based on their individual counts. The answers should all end up having the same number of significant figures.  You will need to check each student’s calculations to make sure they have correctly calculated the results.  You will also need to confirm their results are within the expected range. If the results sit outside of the expected range, it is up to you to decide if you will permit the student to repeat the count.  Model answers, sample responses or a criteria for each task or activity is provided below.  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 are satisfactory in this assessment.  Each student prepares three slides per section. Only one slide from each section needs to meet the marking criteria.  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, appropriate clothing – long pants and sleeves, closed shoes and long hair tied back.  Personal protective equipment (PPE) – safety glasses and lab coat |
| **Assessor must provide** | Laboratory  Equipment and reagents listed in the following documents, as well as a copy of each per person attending the assessment event:   1. Standard operating procedure *M406: Improved Neubauer counting chambe*r 2. Form *F403: Cell counting worksheet* 3. Standard operating procedure *M403: Compound light microscopy*   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 / 1 hour / microbiology laboratory |

## Part 1: Red blood cell (RBC) count

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: Red blood cell count**

Your task is to successfully use a counting chamber to count red blood cells.

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

* A control sample
* An unknown sample
* Standard operating procedure *M406: Improved Neubauer counting chamber*
* Standard operating procedure *M403: Compound light microscopy*
* Form *F403: Cell counting worksheet*
* The tools and equipment listed under section 7.4 in *M406: Improved Neubauer counting chamber*
* Compound light microscope

**Step 1: Preparation**

1. Put on the correct PPE
2. Read section 7.4 of *M406: Improved Neubauer counting chamber*
3. Label as per the instructions in section 7.4 of *M406: Improved Neubauer counting chamber*
4. Log your samples in the table below:

Table 2 sample log

| Sample ID | Sample description | Date received | Time received |
| --- | --- | --- | --- |
| **01** | Control | 27/2/20 | 11:45 |
| **02** | Unknown | 27/2/20 | 11:45 |

**Step 2: Complete control sample**

1. Follow section 7.4.3 of *M406: Improved Neubauer counting chamber* to complete this task

**STOP!** Your assessor must observe you loading the counting chamber.

1. Complete the worksheet, *F403: Cell counting worksheet* as you go

**NOTE:**

If your sample requires further dilutions, follow the rest of the method

**STOP!** Confirm your results with your assessor before you start counting the unknown sample.

**Step 3: Complete unknown sample**

1. Follow section 7.4.3 of *M406: Improved Neubauer counting chamber* to complete this task

**STOP!** If the assessor has not seen you loading your sample into the counting chamber, it must be done now.

1. Complete the worksheet, *F403: Cell counting worksheet* as you go

**NOTE:**

If your sample requires further dilutions, follow the rest of the method

**Step 4: Housekeeping**

1. Follow section 7.5 of *M406: Improved Neubauer counting chamber* and decontaminate your workstation

## 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 3 Observation Checklist

| Item # | Observation | S | U/S | Assessor Comments  (Describe the student’s ability in demonstrating the required skills and knowledge, including recording any questions asked and the student responses) |
| --- | --- | --- | --- | --- |
| 1 | Student logged and labelled samples as per instructions in section 7.4.2 of *M406: Improved Neubauer counting chamber* |  |  | The student has completed the table above, as per benchmark response.  Sample ID is used on all documentation, counting chamber is labelled (IN PENCIL) with technician initials and sample ID, as per instructions in section 7.4.2 of *M406: Improved Neubauer counting chamber.* |
| 2 | The student wore the correct PPE for the task |  |  | The student is wearing a lab coat, safety glasses, long pants and sleeves and hair tied back. |
| 3 | Student loaded the sample into the counting chamber correctly |  |  | Student followed the method in section 7.4.3 of *M406: Improved Neubauer counting* chamber to load the chamber.  The sample was correctly loaded into the haemocytometer |
| 4 | Performed calculations correctly by completing the *M403: Cell Counting Worksheet* including:   * counts on sample grids * dilutions * number of cells in original sample after dilution * cells/volume based on cell counts |  |  | Student followed the method in section 7.4.3 of *M406: Improved Neubauer counting* chamber and counted the cells accurately.  The student performed calculations correctly, as per benchmark response MSL973019\_MG\_Sk\_5of5\_SR1 adjusted by the assessor for the sample provided for this assessment event. |