# Practical

**Assessment event 3 of 3**

## Criteria

### Unit code, name and release number

MSL973015 – Prepare culture media (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\*\*

## 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: 22/07/2019

Date modified: 28/01/2020

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 |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your skills as would be required to competently prepare culture media. |
| **Assessment Event number** | 3 of 3 |
| **Instructions for this assessment** | This is a skill based assessment and will be assessing you on your ability to demonstrate skills required in the unit.  This assessment is in 6 parts:   1. Columbia agar 2. MacConkey agar 3. Eagle’s medium 4. Quality assurance and storage 5. Observation Checklist 6. Assessment feedback |
| **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 successfully complete this assessment the student will be available at the arranged time to complete all the assessment criteria as outlined in the assessment instructions.  All parts of the observable task must be performed to a satisfactory level as indicated in the criteria section of the Observation Checklist.  All oral questions must be answered correctly to be deemed satisfactory in this assessment task; however, Assessors may ask questions to clarify understanding. |
| **What do I need to provide?** | A pen, suitable clothing for a microbiology laboratory, long hair tied back. |
| **Due date/time allowed/venue** | 3 hour laboratory session – Part 1  3 hour laboratory session – Part 2  3 hour laboratory session – Part 3  *24 hours later, to allow for incubation of samples and control plates:*  1 hour laboratory session – Part 4 |
| **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 whether the tasks and activities have been satisfactorily completed. Use these instructions and criteria to ensure you demonstrate the required skills and knowledge.

If this assessment requires you to record information, your assessor will provide you with an appropriate document/template.

This assessment task will be conducted over 4 days:

Days 1 – 3: Parts 1, 2 and 3

Following 24 hours of incubating your control and samples:

Day 2: Part 4

## Part 1: Columbia agar

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

These practicals will be observed by your assessor, or can be digitally recorded and submitted as evidence.

Your responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria in the Observation Checklist to understand what you need to demonstrate in this section of the assessment. This Checklist outlines the assessment criteria used to assess your performance.

Once completed you will need to submit this assessment and the tasks and activities you are required to complete to your assessor for marking.

**Task 1**

For this task, you will prepare a batch of Columbia agar and conduct a quality assurance check of your batch.

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

* Standard operating procedure *M401: Prepare culture media*
* Appropriate materials, reagents and equipment to prepare the culture media and conduct quality assurance on the batch

**Step 1: Research**

* + - 1. Read section 9 of *M401: Prepare culture media* thoroughly
      2. Read the observation checklist to make sure you understand what you are required to do to be deemed competent for this task

**Step 2: Prepare culture media**

1. Ensure you are wearing appropriate personal protective equipment (PPE) for this task
2. Follow section 7 of *M401: Prepare culture media* to disinfect your workstation and clean your hands
3. Collect the equipment and materials you need to complete your assessment task
4. Following *M401: Prepare culture media* section 9, prepare the batch of Columbia agar
5. Streak one plate with the control sample provided, using aseptic techniques, as described in section 8 of *M401: Prepare culture media*

**Step 3: Dispose of wastes**

1. Dispose of all wastes appropriately, by placing recyclable tools and equipment in the steriliser buckets or trays and wastes into biohazards or general waste bins as required

## Part 2: MacConkey agar

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

These practicals will be observed by your assessor, or can be digitally recorded and submitted as evidence.

Your responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria in the Observation Checklist to understand what you need to demonstrate in this section of the assessment. This Checklist outlines the assessment criteria used to assess your performance.

Once completed you will need to submit this assessment and the tasks and activities you are required to complete to your assessor for marking.

**Task 2**

For this task, you will prepare a batch of MacConkey agar and conduct a quality assurance check of your batch.

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

* Standard operating procedure *M401: Prepare culture media*
* Appropriate materials, reagents and equipment to prepare the culture media and conduct quality assurance on the batch

**Step 1: Research**

1. Read section 10 of *M401: Prepare culture media* thoroughly
2. Read the observation checklist to make sure you understand what you are required to do to be deemed competent for this task

**Step 2: Prepare culture media**

1. Ensure you are wearing appropriate personal protective equipment (PPE) for this task
2. Follow section 7 of *M401: Prepare culture media* to disinfect your workstation and clean your hands
3. Collect the equipment and materials you need to complete your assessment task
4. Following *M401: Prepare culture media* section 10, prepare the batch of MackConkey agar
5. Streak one plate with the control sample provided, using aseptic techniques, as described in section 8 of *M401: Prepare culture media*

**Step 3: Dispose of wastes**

Dispose of all wastes appropriately, by placing recyclable tools and equipment in the steriliser buckets or trays and wastes into biohazards or general waste bins as required

## Part 3: Eagle’s medium

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

These practicals will be observed by your assessor, or can be digitally recorded and submitted as evidence.

Your responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria in the Observation Checklist to understand what you need to demonstrate in this section of the assessment. This Checklist outlines the assessment criteria used to assess your performance.

Once completed you will need to submit this assessment and the tasks and activities you are required to complete to your assessor for marking.

**Task 3**

For this task, you will prepare a batch of Eagle’s medium and conduct a quality assurance check of your batch.

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

* Standard operating procedure *M401: Prepare culture media*
* Appropriate materials, reagents and equipment to prepare the culture media and conduct quality assurance on the batch

**Step 1: Research**

1. Read section 11 of *M401: Prepare culture media* thoroughly

Read the observation checklist to make sure you understand what you are required to do to be deemed competent for this task

**Step 2: Prepare culture media**

1. Ensure you are wearing appropriate personal protective equipment (PPE) for this task
2. Follow section 7 of *M401: Prepare culture media* to disinfect your workstation and clean your hands
3. Collect the equipment and materials you need to complete your assessment task
4. Following *M401: Prepare culture media* section 11, prepare the batch of Eagle’s medium and report the final pH of the solution in the space below:

Table 2 pH

|  |  |
| --- | --- |
| pH of medium: |  |

1. Follow quality assurance procedures and incubate one flask of Eagle’s medium to verify your aseptic technique
2. Store the remaining flasks in the fridge

**Step 3: Dispose of wastes**

Dispose of all wastes appropriately, by placing recyclable tools and equipment in the steriliser buckets or trays and wastes into biohazards or general waste bins as required

## Part 4: Quality assurance and storage

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

These practicals will be observed by your assessor, or can be digitally recorded and submitted as evidence.

Your responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria in the Observation Checklist to understand what you need to demonstrate in this section of the assessment. This Checklist outlines the assessment criteria used to assess your performance.

Once completed you will need to submit this assessment and the tasks and activities you are required to complete to your assessor for marking.

**Task 4**

Quality assurance provides evidence of the success of your aseptic technique when preparing culture media. For this final task, you will examine your quality assurance plates and bottle and confirm the growth of a single organism.

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

* Standard operating procedure *M401: Prepare culture media*
* Batch log
* Quality assurance log
* The batches of media you prepared in Parts 1, 2 and 3 of this assessment event
* The control plates and broth you inoculated in Parts 1, 2 and 3 of this assessment event

**Step 1: Quality assurance**

1. Check each batch of plates and flasks for sterility and signs of damage
2. Complete the batch log (provided with this assessment task) as you go
3. When finished, place all three batches into the fridge for storage

**Step 2: Control plates and broth**

1. Examine your plates and broth for growth
2. Complete the Quality assurance log on the page below
3. When you have finished examining your plates and broth and completed the Quality assurance log, have your assessor check your results
4. Before you leave, follow section 7 of *M401: Prepare culture media* and disinfect your workstation
5. Dispose of all wastes appropriately, by placing recyclable tools and equipment in the steriliser buckets or trays and wastes into biohazards or general waste bins as required

**Quality assurance log**

Table 3 QA log

| Part | Sample | Description of growth on plate |
| --- | --- | --- |
| 1 | *Staphylococcus epidermis* |  |
| 2 | *Escheria coli* |  |
| 3 | Eagle’s medium control |  |

## Part 5: Observation Checklist

The Observation Checklist will be used by your assessor to mark your performance in any of the previous three event types. Use this Checklist to understand what skills you need to demonstrate in the practical. The Checklist lists the assessment criteria used to determine whether you have successfully completed this assessment event. All the criteria must be met. Your demonstration will be used as part of the overall evidence requirements of the unit. The assessor may ask questions while the demonstration is taking place or if appropriate directly after the task/activity has been completed.

Table 4 Observation Checklist

| Item # | Task/Activity Performed | Media 1  Date: | | Media 2  Date: | | Media 3  Date: | | Assessor Comments (Describe the student’s ability in demonstrating the required skills and knowledge) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S | U/S | S | U/S | S | U/S |
| 1 | The student has mixed the media and solvent evenly in a suitably sized and heat-proof vessel. |  |  |  |  |  |  |  |
| 2 | Student labelled containers and batches in accordance with Figure 4 of *M401: Prepare culture media* |  |  |  |  |  |  |  |
| 3 | The student has operated the pH meter to check the pH of the media as required. |  |  |  |  |  |  |  |
| 4 | Student has dispensed each batch of media into appropriate packaging for sterilisation and left enough room for expansion. Sterilisation indicator has been applied correctly. |  |  |  |  |  |  |  |
| 5 | The student has loaded the steriliser according to manufacturer’s instructions and run on correct program to ensure complete sterilisation of media. |  |  |  |  |  |  |  |
| 6 | Student has allowed media to cool, and has added additives and labile constituents as required by *M401: Prepare culture media*. The media was blended to even consistency. |  |  |  |  |  |  |  |
| 7 | Student aseptically dispensed the media to suitable containers for use and then stored media to maximise shelf-life and minimise contamination. |  |  |  |  |  |  |  |
| 8 | Student used the correct personal protective equipment (PPE) |  |  |  |  |  |  |  |
| 9 | Student transported and placed contaminated, disposable and reusable items into the correct receptacles/areas for disinfection, sterilisation, cleaning or disposal |  |  |  |  |  |  |  |
| 10 | Student cleaned and disinfected the work area and equipment after use |  |  |  |  |  |  |  |
| **The following observation can only be conducted after the media has been incubated for 24 hours**  **Date of Observation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | |
| 11 | Batches have been logged |  |  |  |  |  |  |  |
| 12 | Sterility checks are performed on each batch and media is inspected for quality |  |  |  |  |  |  |  |
| 13 | Control samples are inspected for single growth |  |  |  |  |  |  |  |

## Part 6: 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.***