# Knowledge assessment 2

**Assessment event 2 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: 18/11/2019

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 knowledge as would be required to understand the principles behind preparing culture media. |
| **Assessment Event number** | 2 of 3 |
| **Instructions for this assessment** | This is a written assessment and it will be assessing you on your knowledge of the unit.  This assessment is in 3 parts:   1. Multiple choice questions 2. Short answer questions 3. Assessment feedback |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your trainer for marking.  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, student workbook for this unit |
| **Due date/time allowed** | TBA / 30 minutes |
| **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. |

## Part 1: Multiple choice

Read the question and each answer carefully. Put an X in the table next to your chosen answer.

1. What indicators can be used to show that sterility has been achieved?

Table 2 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Autoclave tape |  |
| 1. Thermolog strips |  |
| 1. Sticky tape |  |
| 1. Both a) and b) |  |

1. What is meant by aseptic technique?

Table 3 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. To kill all bacteria |  |
| 1. To work in an environment free of contamination |  |
| 1. To gain a pure culture |  |
| 1. To wipe down the benches with antiseptic |  |

1. Ethical behaviour in a laboratory would be considered to be:

Table 4 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. sharing confidential test results with your colleagues over lunch |  |
| 1. accidentally contaminating a sample and not informing your supervisor |  |
| 1. throwing out a sample that has incorrect paperwork and failing to inform the requesting or authorised doctor |  |
| 1. none of the above |  |

1. What is the purpose of autoclaves, boiling, high pressure steam and high temperatures?

Table 5 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. The use of steam to kills microorganisms |  |
| 1. The use of pressure to kill microorganisms |  |
| 1. The use of heat to kill microorganisms |  |
| 1. All of the above |  |

1. What legal requirements are there for a microbiology laboratory?

Table 6 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. None |  |
| 1. To follow all relevant legislation, guidelines and work under an accrediting body (i.e. NATA) |  |
| 1. To make sure patient confidentiality is met |  |
| 1. To make sure that staff are paid correctly |  |

1. Gas and chemical treatments sterilise by:

Table 7 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. removing oxygen to starve aerobic microorganisms |  |
| 1. killing microorganisms through chemical means |  |
| 1. the use of heat to kill microorganisms |  |
| 1. both a) and b) |  |

## Part 2: Short answer

Read the question carefully. The recommended word count is listed at the end of each question.

1. Explain what membrane filtration is and what it involves (10 to 20 words):
2. What is the purpose of sterilisation (5 to 20 words)?
3. What would happen to culture media quality if stored incorrectly? Give two examples of poor storage and the effect on the culture media (10 to 20 words):
4. You are about to prepare culture media. List the environmental sustainability issues related to this task (10 to 30 words):
5. How regularly should culture media stocks be checked to make sure they are suitable for use (3 to 10 words)?
6. How should plates and broths be stored and for how long will they remain viable (10 to 20 words)?
7. What temperature and for how long should the autoclave be set to for the sterilisation of standard culture media (2 to 10 words)?
8. Complete the table below for hazards and risks in a laboratory, by listing a risk and the controls in place to prevent that risk.
   1. Risk column (1 to 5 words per cell)
   2. Controls column (5 to 15 words per cell)

Table 8 short answer

| Hazard | Risk | Controls |
| --- | --- | --- |
| Sharps |  |  |
| Sources of heat |  |  |
| Molten agar, fluids under pressure |  |  |
| Ultraviolet (UV) light |  |  |
| Microorganisms |  |  |
| Hazardous substances |  |  |

1. Complete the following table comparing radiation and autoclaving as a method of sterilisation. Circle the correct answer.

Table 9 short answer

|  |  |  |
| --- | --- | --- |
| Sterilisation technique | Penetrates plastic packaging | High temperature required |
| Autoclaving | Yes / No | Yes / No |
| Radiation | Yes / No | Yes / No |

1. List the Work Health and Safety (WHS) requirements for each stage of processing samples in the table below (5 to 20 words per cell):

Table 10 short answer

| Stage of processing | WHS requirements |
| --- | --- |
| Preparation for work |  |
| Handling biological materials |  |
| Analysis of results |  |
| Housekeeping |  |
| Data entry |  |

1. List two sterile practices used during aseptic transfer (15 to 20 words):
2. What is the effect of poor sterile practices and hygiene procedures on the culture and results (10 to 30 words)?

## Part 3: 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.***