PURDUE UNIVERSITY | College of Veterinary Medicine

Summer 2026 version

Microbiology

Mentorship

VM 21300

Criteria

Logbook

Index of Logbook

Student Information

Clinical Mentorship Tasks

***NOTE: The student will be informed before the kit is sent (in week 2 of semester), and materials must be used within 1-2 weeks in order to obtain accurate results. It is imperative that the student follow all steps closely for these tasks, as additional materials will not be sent. If there are questions please contact the instructor BEFORE performing the task. There is a 7-day plan to complete all tasks, outlined in this logbook. If the student drops the course after the kit has been sent, an additional kit will NOT be sent when the student registers for the course again. The student will be responsible for purchasing the necessary materials.**

ALL SKILLS MUST BE DEMONSTRATED ON LIVE ANIMALS. Models or cadavers are not acceptable

Student Information

Contact Information

Questions regarding the overall Clinical Mentorship process should be directed to-

Jennifer Smith, BS, RVT, LATG

Clinical Mentorship Coordinator

jpope@purdue.edu

Questions regarding this mentorship (tasks, due dates, etc.) should be directed to the instructor for this mentorship course.

Animal Use Guidelines

The student shall abide by the following guidelines when performing mentorship tasks:

1. All tasks must be performed on live animals. Models or cadavers are not acceptable unless explicitly stated.
2. All animals used for demonstration of mentorship skills must be appropriated restrained by another person, for the safety of the patient and the student.
3. A mentorship task may be performed only once on a single animal.
4. A student may perform a maximum of six (6) minimally invasive tasks (denoted by one dagger symbol) (†) on a single animal within a 24-hour period.
5. A student may perform a maximum of three (3) moderately invasive tasks (denoted by two dagger symbols) (††) on a single animal within a 24-hour period.
6. When combining tasks, a student may perform a maximum of three (3) minimally and one (1) moderately invasive tasks on a single animal within a 24-hour period.
7. Tasks denoted with no dagger symbols do not involve live animal use.
8. Students are expected to use their (and their mentor's) professional judgment when selecting patients on whom to demonstrate required hands-on skills. The chosen patient must be clinically appropriate for the skill being performed. For example, a patient experiencing respiratory distress or other significant medical compromise should not be used for routine, non-urgent skills (e.g. external parasite check, toe nail trim). At all times, patient welfare and ethical decision-making should guide the choice of case.
9. Students may use their own pets to complete clinical skills, however, personal pets should not be used solely for the purpose of fulfilling a task; ideally, the pet should have a legitimate medical need. When considering the use of a personal pet, students must follow all animal-use guidelines and ensure that the animal's welfare, safety, and best medical interest remain the highest priority.

For example, a student might perform the following tasks on an animal in a single day-

- Restrain a dog in sternal recumbency†
- Restrain a dog in lateral recumbency†
- Restrain a dog for cephalic venipuncture†
- Restrain a dog for saphenous venipuncture†
- Restrain a dog for jugular venipuncture†
- Administer subcutaneous injection††
- Administer intramuscular injection††
- Intravenous cephalic injection – canine††

The maximum allowable use of an animal applies **per patient**, not per student or per task. If multiple students share the same patient, the total number of permitted tasks does **not** increase; rather, it must be divided among the students to remain within the established limits for that patient.

In addition, animals must be provided with adequate rest between invasive procedures. A minimum **24-hour rest period** is required before a patient may undergo another invasive skill performance. This ensures the animal's comfort, safety, and overall well-being. Non-invasive tasks should be scheduled thoughtfully to avoid undue stress and must always prioritize the patient's welfare.

Ensuring the welfare and safety of animals during handling and restraint is paramount. Proper techniques must be employed to minimize stress and prevent injury. This involves understanding the

normal behavior of the animal, using humane methods, and applying the least amount of restraint necessary to achieve the desired outcome. Training in these techniques is essential for all personnel involved in animal care. The use of physical, mechanical, or pharmaceutical restraints should be carefully considered and monitored to ensure they are appropriate and effective.

The student is expected to utilize Fear Free® techniques for animal handling and restraint, as well as ensure that all patients are handled and restrained appropriately when they perform skills.

All students and mentors are expected to track and adhere to these guidelines. By adhering to these guidelines, we can promote the health and well-being of animals while ensuring an ethical, responsible, and humane use of animals in a safe environment for both patients and veterinary personnel.

Failure to comply with the Animal Use Guidelines may result in consequences ranging from loss of points or repeating the task, up to failure of the course and / or separation from the program.

Selecting the Clinical Mentorship Site – Facility Requirements

You must visit the Clinical Mentorship Site and determine if the following supplies and equipment are readily available to you for use during your Clinical Mentorship. The mentorship supervisor will verify the availability of required items by completing the Mentorship and Facility Requirement Agreement.

The veterinary care facility must be equipped with the following equipment:

- Forceps or hemostats
- Rule with mm markings
- Flame source (e.g. cigarette lighter, wooden matches, Bunsen burner)
- Microscope with 10X, 40X, 100X
- Incubator – no specific type (even an egg incubator will work) as long as it reaches 37 degrees Celsius and has a humidity range of 60-80%

In addition, the following disposable items must be available:

- Latex gloves (non-sterile)
- Cotton balls
- 70% isopropyl alcohol
- Scalpel blades (#10 or #15)
- Sterile cotton-tipped applicators
- Sterile saline
- Microscope slides
- Immersion oil
- 3% hydrogen peroxide
- Wax pencil or crayon

The student will be provided with a kit* which will include:

- Disposable inoculating loops
- Disposable pipettes
- Gram stain kit
- Blood agar plates
- Mueller-Hinton agar plates
- Dermatophyte test medium
- Oxidate reagent
- 0.5 McFarland nephelometer
- Antibiotic discs

All supplies, medications, and equipment used for **actual patient care or diagnostic workups** must be **in date (not expired)** to ensure safety, accuracy, and adherence to professional standards. Items that are **expired may only be used for teaching, demonstration, or practice purposes**. Students and mentors are responsible for verifying expiration dates prior to use in any clinical setting.

***NOTE: The student will be informed before the kit is sent (in week 2 of semester), and materials must be used within 1-2 weeks in order to obtain accurate results. It is imperative that the student follow all steps closely for these tasks, as additional materials will not be sent. If there are questions please contact the instructor BEFORE performing the task. There is a 7-day plan to complete all tasks, outlined in this logbook. If the student drops the course after the kit has been sent, an additional kit**

will NOT be sent when the student registers for the course again. The student will be responsible for purchasing the necessary materials.

Important Information about Performing Tasks

Before your supplies arrive, we highly recommend that you go into the VM 21300 course in Brightspace to review the instructional videos. You should also review the task criteria in the VM 21300 logbook. If you have any questions about successfully completing the criteria for each of the microbiology tasks, contact the instructor for clarification. You will need to allow seven consecutive days for performance of the microbiology tasks. Following is an outline of what should be done each day:

All tasks must be performed INSIDE OF YOUR HOSPITAL using appropriate PPE, especially gloves, since handling live bacteria! These tasks are never allowed to be completed within your home.

Day 1

- Collect samples and inoculate dermatophyte culture media (orange media/Derm-Duet)
- Swab several things (or animals) in the clinic and streak several blood agar plates to obtain isolated colonies.

Day 2

- Select isolated colonies from the blood agar plates that you inoculated on day one and streak several new blood agar plates to obtain isolated colonies in a pure culture (i.e., only one type of bacteria growing on the plate)
- Check dermatophyte culture for growth and color change or contaminated growth

Day 3 (the same pure culture blood agar plate should be used for the rest of tasks)

- Utilize well-isolated colonies from the pure culture blood agar plate that you inoculated on day two to create your gram stain slides
- Utilize well-isolated colonies from the pure culture blood agar plates that you inoculated on day two to inoculate your Mueller-Hinton plates, and place antimicrobial discs on the plates
- Utilize well-isolated colonies from the pure culture blood agar plates that you inoculated on day two to perform your oxidase and catalase tests
- Check dermatophyte culture for growth and color change

Day 4

- Interpret and record the results of your Kirby Bauer test
- Check dermatophyte culture for growth and color change

Days 5-6

- Check dermatophyte culture for growth and color change

Day 7

- Show your dermatophyte culture on your video and verbally describe the appearance of any growth as well as any changes to the color of the agar

Introduction to Essential Tasks and Criteria

Before starting each task-

1. Read the Goal, Description, Criteria, and Materials to be Submitted for Evaluation and Verification. Understand what is expected for each task.
2. Make sure that all equipment and supplies needed to complete the task are available. Pay particular attention to the details of what needs to be documented and submitted.
3. Make sure to obtain appropriate permissions where necessary. Please inform the facility's owner/manager of activities. A good relationship with the veterinarian in charge is key to having a positive Clinical Mentorship experience.

After performing each task-

1. Label all items submitted so that the materials submitted for evaluation and validation at Purdue are identified as the student's submission.
2. Label all videos posted to Brightspace with the task number.
3. Submit materials by the deadlines listed in the course syllabus

Introduction to Special Projects

Certain mentorships will have required projects to complete in addition to the required tasks. Written projects should be typed, and checked for correct grammar and spelling. Photos should be embedded into the related written documents.

Before starting each project-

1. Read through the project in its entirety. This will give you a description of the project and what is needed to complete it successfully.
2. Determine what materials, if any, need to be submitted for completion of the project.
3. Most projects will come with a list of questions/points that need to be addressed and included in the written document.
4. If video is required for a project, it should be noted on the videotape verbally that this is for the project and not another required task. Some projects may require a verbal narration of a student doing something. Each individual project will define if that is a necessary requirement for that project.

1. VIDEO VERIFICATION OF REQUIRED EQUIPMENT AND SUPPLIES

Goal: Ensure that the student will have access to all equipment and supplies necessary to complete the skills in this course.

Description: The student will provide a narrated video showing equipment and supplies specific to this mentorship, to verify that required items are available to them and adequate for completion of tasks in their facility.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student walked through the facility and showed the following clearly:
    - VTDL-provided sign informing clients that students may be involved in patient care (it should be displayed in an area that is visible to clients). **(CRITICAL)**
    - Ruler with mm markings **(CRITICAL)**
    - Flame source (e.g. cigarette lighter, wooden matches, Bunsen burner) **(CRITICAL)**
    - Microscope with 10X, 40X, 100X **(CRITICAL)**
    - Incubator – no specific type (even an egg incubator will work), as long as it reaches 37 degrees Celsius and provided a humidity range of 60-80%. **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

Number of Times Task Needs to be Successfully Performed: 1

Materials Submitted for Evaluation and Verification:

1. Task Verification Form for Video Verification of Required Equipment and Supplies, signed by the Clinical Mentorship supervisor.
2. One video showing the student as they introduced themselves and walked through the facility, showing the listed items clearly. The student narrated the video live as they showed items.

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD, BVS/BVSc, Other:_____

I verify that the student will have access to the items shown, for tasks in this course.

Signature of Clinical Mentorship Supervisor: _____

2. COLLECT A SAMPLE FOR DERMATOPHYTE CULTURE AND INOCULATE DERMATOPHYTE CULTURE MEDIA†

Goal: To collect an adequate sample for Dermatophyte culture and use that sample to inoculate Dermatophyte Culture Media in a manner that will yield accurate results.

Description: The student will identify a possible Dermatophyte lesion and scrape/pluck an appropriate sample from the edge of the lesion. The student will use the sample to inoculate the Dermatophyte Culture Media.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student identified a suspected Dermatophyte lesion
- The student washed and dried the affected area with soap and water **(CRITICAL)**
- The student obtained a small scraping of superficial debris and hair from the margin of the lesion using a sterile scalpel blade and forceps, or plucked a sample of hair from the margin of the lesion using hemostats **(CRITICAL)**
- The student inoculated the culture media by placing the sample slightly below the surface of the media
- The student left the lid to the tube or plate slightly open **(CRITICAL)**
- The student allowed the culture to incubate at room temperature **(CRITICAL)**
- The student showed the plate after at least seven days' incubation and verbally stated whether the result was positive or negative for dermatophytosis or evidence of contamination at that time (understanding that the plate should be checked daily for up to one month) **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

Number of Times Task Needs to be Successfully Performed: 1

Materials Submitted for Evaluation and Verification:

1. Task verification form for Collect a Sample for Dermatophyte Culture and Inoculate Dermatophyte Culture Media task, signed by the Clinical mentorship supervisor.
2. A video that clearly shows the student collecting a sample for Dermatophyte culture and inoculating Dermatophyte culture media, AND showing growth/results as defined in the above criteria for this task.

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD, BVS/BVSc, Other:_____

Patient Name: _____ **Date:** _____

I verify that the student performed this task under my active and continuous supervision.

Signature of Clinical Mentorship Supervisor: _____

3. COLLECT SWAB FOR CULTURE AND STREAK AN AGAR PLATE TO OBTAIN ISOLATED COLONIES

Goal: To collect an adequate sample for culture and use that sample to inoculate an agar plate in a manner that will yield discreet isolated colonies of growth.

Description: The student will collect a sample with a sterile swab from an area in the hospital or from a patient that would likely yield bacterial growth. The student will use the sample to inoculate a blood agar plate.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student lightly moistened a sterile swab with sterile saline
- The student used the sterile swab to collect a sample from an area of the hospital (e.g. dirty sink, floor, drain, etc.) or from a patient (nose, mouth, ear, wound) and used that swab to apply the primary streak on a blood agar plate **(CRITICAL)**
- The student rotated the plate and used an inoculating loop to streak the next quadrant of the blood agar plate, being careful to overlap the primary streak only once or twice **(CRITICAL)**
- The student rotated the plate and used an inoculating loop to streak the third quadrant of the blood agar, being careful to overlap the second streak only once or twice **(CRITICAL)**
- The student rotated the plate again and used an inoculating loop to streak the fourth and final quadrant of the blood agar, being careful to overlap the third streak only once or twice **(CRITICAL)**
- The student inverted the plate and placed it in an incubator for 18-24 hours **(CRITICAL)**
- The student checked the plate after the incubation period for isolated colonies, showing the plate and verbally stating observations (e.g., colony characteristics such as round vs irregular, raised vs flat, color vs clear and any evidence of hemolysis – alpha, beta, or gamma) **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

Number of Times Task Needs to be Successfully Performed: 1

Materials Submitted for Evaluation and Verification:

1. Task Verification form for Collect Swab for Culture and Streak an Agar Plate to Obtain Isolated Colonies task, signed by the Clinical Mentorship supervisor.
2. A video that clearly shows the student collecting a sample swab and streaking a blood agar plate using the streak isolation technique, AND showing growth as defined in the above criteria for this task.

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD, BVS/BVSc, Other:_____

Patient Name: _____ **Date:** _____

I verify that the student performed this task under my active and continuous supervision.

Signature of Clinical Mentorship Supervisor: _____

4. STREAK AGAR PLATE TO OBTAIN A PURE CULTURE

Goal: To collect a sample from an isolated colony and streak an agar plate to obtain a pure culture with isolated colonies.

Description: The student will select an isolated colony of bacteria with an inoculating loop and streak it onto a blood agar plate using the streak isolation technique to obtain a pure culture with isolated colonies which will be used for all subsequent tasks.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student used an inoculating loop to collect a sample of bacteria from an isolated colony from a blood agar plate inoculated for the previous task, and used that sample to apply the primary streak on a blood agar plate. **(CRITICAL)**
- The student rotated the plate and used an inoculating loop to streak the second quadrant of the blood agar, being careful to overlap the primary streak only once or twice **(CRITICAL)**
- The student rotated the plate and used an inoculating loop to streak the third quadrant of the blood agar, being careful to overlap the second streak only once or twice **(CRITICAL)**
- The student rotated the plate and used an inoculating loop to streak the fourth and final quadrant of the blood agar, being careful to overlap the third streak only once or twice **(CRITICAL)**
- The student inverted the agar plate and placed it in an incubator for 18-24 hours **(CRITICAL)**
- The student checked the plate after the incubation period for isolated colonies, showing the plate and verbally stating observations (e.g., colony characteristics such as round vs irregular, raised vs flat, color vs clear and any evidence of hemolysis – alpha, beta, or gamma) **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

Number of Times Task Needs to be Successfully Performed: 3

Materials Submitted for Evaluation and Verification:

1. Task Verification form for Streak Agar Plate to Obtain a Pure Culture task, signed by the Clinical Mentorship supervisor.
2. A video that clearly shows the student collecting a sample from an isolated colony with an inoculating loop and streaking the plate using the proper technique, AND showing growth as defined in the above criteria for this task.

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD,

BVS/BVSc, Other:_____

Date: _____

Date: _____
Date: _____

I verify that the student performed this task under my active and continuous supervision.

Signature of Clinical Mentorship Supervisor: _____

5. PERFORM KIRBY-BAUER DISC SENSITIVITY TEST

Goal: To successfully perform a Kirby-Bauer Disc Sensitivity Test such that one can measure zones and determine the bacterial sample's resistance or susceptibility to certain antibiotics.

Description: The student will perform a Kirby-Bauer Disc Sensitivity Test on an organism obtained from an isolated colony from the pure culture plate in such a way that the bacterial sample can be determined as being susceptible, resistant, or intermediate to certain antibiotics.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student selected 4-5 morphologically identical colonies from a blood agar or MacConkey plate and aseptically transferred the selected colonies to a tube of sterile saline with an inoculating loop **(CRITICAL)**
- The student mixed the contents of the tube by swirling (not inverting) the tube so that the organisms were uniformly suspended in the saline
- The student compared their tube with 0.5 McFarland nephelometer to ensure that the turbidity in the tube was the same **(CRITICAL)**
- The student adjusted the turbidity in their tube as needed, by dilution or adding of colonies, to attain a suspension of bacteria with a turbidity equal to the 0.5 McFarland nephelometer
- The student used aseptic technique to dip a sterile cotton swab into the saline suspension of bacteria **(CRITICAL)**
- The student rotated the swab against the inner wall of the tube to express excess fluid The student swabbed the **entire surface** of a Mueller-Hinton agar plate with the swab **(CRITICAL)**
- The student rotated the plate 60° and re-swabbed the **entire surface** **(CRITICAL)**
- The student again rotated the plate 60° and re-swabbed the **entire surface**, then ran the swab around the outside edge of the agar **(CRITICAL)**
- The student applied the antibiotic discs with flamed forceps that were allowed to cool between uses. The student gently pressed each disc on the agar surface to ensure complete contact, and made sure the discs were at least 24 mm apart from center to center. The student also ensured that the discs did not move after contact with the agar surface was made **(CRITICAL)**
- The student allowed the plate to sit for 1-2 minutes, then inverted the plate and placed it into an incubator **(CRITICAL)**
- The student removed the plate from the incubator after 16-18 hours and showed the plate, verbally stating observations **(CRITICAL)**
- The student measured the cleared zone diameters in mm, through the bottom of the plate **(CRITICAL)**
- The student recorded the measurements and stated them verbally **(CRITICAL)**
- The student consulted the lab table located in this logbook to determine the susceptibility character of the organism, and verbally stated the results **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

5. PERFORM KIRBY-BAUER DISC SENSITIVITY TEST (CONTINUED)

Number of Times Task Needs to be Successfully Performed: 1

Materials Submitted for Evaluation and Verification:

1. Task Verification form for Perform a Kirby-Bauer Disc Sensitivity Test task, signed by the Clinical Mentorship supervisor.
2. One video that clearly shows the student performing Kirby-Bauer Disc Sensitivity Test, AND showing growth, measurement and results as defined in the above criteria for this task.

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD, BVS/BVSc, Other:_____

Date: _____

I verify that the student performed this task under my active and continuous supervision.

Signature of Clinical Mentorship Supervisor: _____

6. PREPARE A GRAM-STAINED SLIDE

Goal: To prepare a Gram-stained slide such that one is able to look at the slide under the 100X oil immersion lens of a microscope and identify morphology and Gram reaction of the bacteria on the slide.

Description: The student will prepare a Gram-stained slide with an organism obtained from an isolated colony from the pure culture plate in such a way that the morphology and Gram reaction of the organism on the slide may be identified.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student selected a bacterial sample by touching a sterile wire or loop to one colony on an agar plate (did not scoop an entire colony off the agar plate) **(CRITICAL)**
- The student mixed the sample on a microscope slide with a drop of water or saline **(CRITICAL)**
- The student circled the sample droplet on the slide with a wax pencil to help identify the area after staining
- The student allowed the slide to air dry **(CRITICAL)**
- The student heat fixed the slide by passing it through a flame 2-3 times, specimen side up **(CRITICAL)**
- The student held the slide over the sink or placed it on a rack over the sink, flooded the smear with crystal violet, and let stand for one minute **(CRITICAL)**
- The student rinsed the smear briefly with water
- The student held the slide over the sink and flooded the smear with Gram's iodine solution and let stand for one minute **(CRITICAL)**
- The student rinsed the smear briefly with water
- The student washed the smear with decolorizer until no more purple color washed off (5- 10 seconds) **(CRITICAL)**
- The student rinsed the smear briefly with water
- The student held the slide over the sink and flooded the smear with safranin and let stand for one minute **(CRITICAL)**
- The student rinsed the smear briefly with water
- The student allowed the slide to air dry or gently blotted it dry between paper towels
- The student mounted the slide on the microscope and focused on the smear beginning with the low power lens and working up to the 100x oil immersion lens (do not forget to use immersion oil), and verbally stated Gram Reaction (positive or negative) and morphology (cocci, bacilli) **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

6. PREPARE A GRAM-STAINED SLIDE (CONTINUED)

Number of Times Task Needs to be Successfully Performed: 2

Materials Submitted for Evaluation and Verification:

1. Task Verification form for Prepare a Gram Stained Slide task, signed by the Clinical Mentorship supervisor.
2. A video that clearly shows the student preparing and evaluating a Gram stain as defined in the above criteria for this task.
3. One clear image of cells on the stained slide through the microscope. The image should be clearly labeled and identified as Gram-positive or Gram-negative as well as stating morphology of the sample (rods, cocci, etc.).

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD, BVS/BVSc, Other:_____

Date: _____

Date: _____

I verify that the student performed this task under my active and continuous supervision.

Signature of Clinical Mentorship Supervisor: _____

7. PERFORM CATALASE TEST

Goal: To successfully perform a catalase test such that one is able to look at the slide and determine whether a bacteria is catalase positive or negative.

Description: The student will perform a catalase test on an organism obtained from an isolated colony from the pure culture plate in such a way that the sample may be determined to be catalase positive or negative.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student selected a bacterial sample by touching a sterile loop or wire to the center of one colony on an agar plate. If a blood agar plate was used, the student avoided contacting the agar with the loop or wire **(CRITICAL)**
- The student applied a drop of 3% hydrogen peroxide onto a microscope slide **(CRITICAL)**
- The student smeared the sample in the drop of hydrogen peroxide **(CRITICAL)**
- The student immediately observed the slide for bubbling. If using a loop, the student observed the loop for bubbling as well **(CRITICAL)**
- The student showed the slide and verbally identified whether the sample was catalase positive (bubbling) or negative **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

Number of Times Task Needs to be Successfully Performed: 1

Materials Submitted for Evaluation and Verification:

1. Task Verification Form for Perform Catalase Test skill, signed by the Clinical Mentorship supervisor.
2. A video that clearly shows the student performing a catalase test as defined in the above criteria for this task.

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD, BVS/BVSc, Other:_____

I verify that the student performed this task under my active and continuous supervision.

Signature of Clinical Mentorship Supervisor: _____

8. PERFORM OXIDASE TEST

Goal: To successfully perform an oxidase test such that one is able to look at the swab and determine whether a bacteria is oxidase positive or negative.

Description: The student will perform an oxidase test on an organism obtained from an isolated colony from the pure culture plate in such a way that the sample may be determined to oxidase positive or negative.

Criteria:

- The student introduced the video and showed their face clearly. **(CRITCAL)**
- The supervising mentor was physically present and actively supervising the student for the entire task. The student showed and introduced their supervising mentor. **(CRITICAL)**
- The student squeezed the oxidase vial to break the glass ampule inside, then inverted the vial and placed a drop of oxidase reagent onto a sterile swab **(CRITICAL)**
- The student touched the moistened swab to an isolated colony on an agar plate **(CRITICAL)**
- The student after touching the swab to the colony then waited 30-60 seconds for a color change on the swab **(CRITICAL)**
- The student showed the swab and verbally identified whether the sample was oxidase positive (turns blue/purple color) or negative **(CRITICAL)**
- The student provided live narration throughout the task. **(CRITICAL)**

Number of Times Task Needs to be Successfully Performed: 1

Materials Submitted for Evaluation and Verification:

1. Task Verification Form for Perform Catalase Test skill, signed by the Clinical Mentorship supervisor.
2. A video that clearly shows the student performing a catalase test as defined in the above criteria for this task.

Student Name: _____

Supervisor Name: _____ RVT, CVT, LVT, LVMT, DVM, VMD, BVS/BVSc, Other:_____

I verify that the student performed this task under my active and continuous supervision.

Signature of Clinical Mentorship Supervisor: _____

9. IDENTIFY BACTERIA PROJECT

This task is designed to take everything you've done in this mentorship and apply it to get closer to identifying the bacteria that was isolated from pure culture. Use the results from the biochemical test results previously performed (such as gram stain, oxidase and catalase tests, morphology including hemolysis).

The tests ran won't be able to fully identify the bacteria grown, but should get you closer. To identify possible bacteria, we are going to use AI! Please follow the specific instructions listed below:

1. We will be using Microsoft CoPilot as this is a protected software.
    a. Visit: https://copilot.microsoft.com/chats/ChaSt31aVqCbyp2Q8NaZx
        i. Log in with your Purdue credentials using the "Work" login
2. In the entry area, use the following prompt:
    a. *I am in a veterinary nursing microbiology course. I swabbed and obtained a pure culture from a* ***(location you obtained swab from *Be specific*)*** *and ran the following characterizing tests with their associated results:* ***(gram stain result WITH morphology: cocci, bacilli, coccobacilli), (catalase results), (oxidase results).*** *Identify the possible bacteria grown based on these results.*
3. This should generate a report and that is what you should include in your submission. You must include your prompt entered, the report itself, and any of the resources that CoPilot used to source the report.
4. Reflect on the report given and answer the following questions:
    a. Does it make sense for the possible bacteria listed to be in that location?
    b. What protocols could the clinic implement to reduce/prevent this growth in the future?