

1. PURPOSE

This Standard Operating Procedure (SOP) describes the procedures for testing of Cercopithecine herpesvirus 1 (herpesvirus simiae, herpes B or monkey B virus) in macaques.

2. RESPONSIBILITY

Veterinarian, veterinary Care staff.

3. MATERIALS

- 3.1. Dry swabs, cotton-tip or synthetic tip
- 3.2. Blood collection materials: syringes, needles, blood collection tubes, HemaTIP microsamplers, EZspot cards
- 3.3. Sterile 1.5-2ml sample collection tubes, e.g., Eppendorf tubes, 50ml conical tubes

4. PROCEDURES FOR POST-EXPOSURE TESTING

- 4.1. Testing by PCR is performed at the National Microbiology Laboratory (NML) of the Public Health Agency of Canada (PHAC).
- 4.2. Sample collection:
 - 4.2.1. Collect enough whole blood to yield a minimum of 0.5ml serum in a sterile sample collection tube.
 - 4.2.2. Additionally, collect swabs from the sites listed below. Place swabs into individually labelled sterile conical tubes.
 - Oral cavity
 - Right eye
 - Left eye
 - Genitalia or rectum
- 4.3. Ensure that all specimen tubes are clearly labeled with the animal ID, date of sampling and collection site (for swabs).
- 4.4. Store samples in refrigerator or freezer until being shipped for testing.
- 4.5. Results are reviewed by the veterinarian and sent to the Occupational Health Physician.

5. PROCEDURES FOR HEALTH MONITORING TESTING

- 5.1. Testing by serology is performed at Charles River Laboratories.
- 5.2. Sample collection:
 - 5.2.1. Submit at least 40uL undiluted serum. Store samples at 4°C.
 - 5.2.2. Alternatively, collect whole blood, with or without anticoagulant. Use a HemaTIP microsampler or EZ-Spot card.
- 5.3. Results are reviewed by the veterinarian and added to the animal's medical file.

SOP REVISION HISTORY

DATE	NEW VERSION
18.03.21	4.2.4.8.2. Zoologix import permit (example in Annex 2) 4.2.4.8.3. Zoologix CDC permit (example in Annex 3)
18.03.21	3.4. Sterile saline
18.12.07	4.1.1.2. Alternatively, collect swabs from the sites listed below. Place swabs in into individually labelled sterile conical tubes with 2ml of sterile saline.
18.12.07	4.1.2.1 Ensure that all specimen tubes are clearly labeled with the animal ID, date of sampling and collection site (for swabs).
19.11.15	5. PROCEDURES FOR HEALTH MONITORING TESTING [All procedures changed, samples no longer sent to Zoologix]
2023.08.07	2. RESPONSIBILITY Veterinarian , veterinary Care staff.
2023.08.07	3.1. Dry swabs, cotton-tip or synthetic tip 3.2. Blood collection materials: syringes, needles, blood collection tubes, HemaTIP microsamplers, EZspot cards 3.3. Sterile 1.5-2ml sample collection tubes, e.g., Eppendorf tubes, 50ml conical tubes 3.4. Sterile saline 3.5. Plastic paraffin film (Parafilm®) 3.6. 50ml conical tubes 3.7. Zip-top biohazard specimen bags 3.8. Insulated shipping container, e.g., Styrofoam box, and cardboard box 3.9. Bubble wrap 3.10. Packing tape 3.11. Dry ice, wet ice or ice packs
2023.08.07	4.1. Testing by PCR is performed at the National Microbiology Laboratory (NML) of the Public Health Agency of Canada (PHAC).
2023.08.07	4.2.1. Collect enough whole blood to yield a minimum of 0.5ml whole blood serum, cerebrospinal fluid or saliva in sterile sample collection tubes. 4.2.2. Alternatively Additionally , collect swabs from the sites listed below. Place swabs into individually labelled sterile conical tubes with 2ml of sterile saline. • Oral cavity • Right eye • Left eye • Genitalia or rectum
2023.08.07	4.3. Sample preparation: 4.3.1. Ensure that all specimen tubes are clearly labeled with the animal ID, date of sampling and collection site (for swabs). 4.3.2. Liquid samples should be placed in 1.5-2ml tubes, securely sealed with plastic paraffin film and placed in a 50ml conical tube to avoid spilling during shipment. 4.3.3. Swabs in conical tubes or conical tubes with liquid samples are placed in a zip-top plastic biohazard specimen bag. 4.3.4. Store samples in refrigerator or freezer until being shipped for testing.
2023.08.07	4.4. Sample submission: 4.4.1. Fill the Special Pathogens Requisition Form (https://rcrsp.canada.ca/gts/reference-diagnostic-test/4781?labid=1021). Print one copy to send with the shipment, keep a copy. • Fill in appropriate sender information. • Fill in patient information section with the information of the human involved in the exposure. Please specify species (rhesus macaque or cynomolgus macaque in the information box). • Fill in clinical history with the information about the injury/exposure. • Fill in specimen information by checking appropriate boxes for paired specimen (No if sending first serum collection, Yes if sending second paired serum collection), check serum box and other box (specify: swabs) and note the date when they were taken. • Check the suspected pathogen: Herpes B virus. • Check the test requested: Molecular Detection and Serology. 4.4.2. Complete a Declaration Letter (Annex 1) with the information on the content of the shipment. Save a copy of the completed form. 4.4.3. Advise the National Microbiology Laboratory 24 hours prior to shipment by sending a copy of the Requisition form to NML.Special.Pathogens@phac-aspc.gc.ca. 4.5. Sample Shipment: 4.5.1. Arrange a courier for next day delivery to: Special Pathogens National Microbiology Laboratory 1015 Arlington Street, Winnipeg, MB R3E 3R2 Telephone: (204) 789-6019/7032 4.5.2. Ship frozen specimens on dry ice and refrigerated samples on wet ice. 4.5.3. Biohazard specimen bags should be placed in bubble wrap over wet or dry ice in insulated shipping container. Seal container with packing tape. 4.5.4. Place the sealed Styrofoam box with the samples into a cardboard box. 4.5.5. Insert documents listed below in a plastic folder and affix to the cardboard box: 4.5.5.1. Special Pathogens Requisition Form 4.5.5.2. Declaration Letter
2023.08.07	4.5. Results are reviewed by the veterinarian and sent to the Occupational Health Physician.
2023.08.07	5.1. Testing by serology is performed at Charles River Laboratories.

2023.08.07	<p>5.2.2.1. HemaTIP microsampler:</p> <ul style="list-style-type: none"> ▲ Touch HemaTIP to blood until tip is completely saturated/red. Do not submerge in blood. ▲ Place HemaTIP upright in clamshell case to dry for 1 hour at ambient temperature. For best results, leave the clamshell open while drying. ▲ Label each individual HemaTIP. ▲ Store at 4°C. <p>5.2.2.2. EZ Spot card:</p> <ul style="list-style-type: none"> ▲ Blood can be spotted directly onto the EZ Spot card from the animal, blood collection tube, or syringe tip. ▲ Write directly on the card cover or affix label(s) to provide sample ID information. ▲ Dry the blood on the card with cover open for 1 hour then fold card cover and place in a zip top bag with desiccant packet. ▲ Store at room temperature. <p>5.3. Sample submission:</p> <p>5.3.1. Complete a Charles River submission for MFIA HBV.</p> <p>5.3.2. Complete a Declaration Letter (Annex 1) with the information on the content of the shipment. Save a copy of the completed form.</p> <p>5.4. Sample shipment:</p> <p>5.4.1. Samples collected on HemaTIP and EZSpot cards can be shipped overnight at ambient temperature.</p> <p>5.4.2. Arrange a courier for next day delivery to:</p> <p>Charles River Laboratories 261 Ballardvale Street Receiving Dock, Bldg 22 Wilmington, MA 01887 USA</p>
2023.08.07	<p>5.3. Results are reviewed by the veterinarian and added to the animal's medical file.</p>
2023.08.07	<p>5.4.3. When shipping liquid samples enclose enough absorbent material (batting, paper toweling or similar) inside the secondary bag to fully absorb the total volume of all samples should a catastrophic spill occur in transit. Use dunnage if necessary to prevent movement of contents.</p> <p>5.4.4. Seal insulated container with packing tape. Place the sealed insulated container with the samples into a cardboard box. Use labels in Annex 4.5.4.5. Insert documents listed below in a plastic folder and affix to the cardboard box:</p> <p>5.4.5.1. Declaration letter</p> <p>5.4.5.2. Import permit (example in Annex 2)</p> <p>5.4.5.3. CDC permit (example in Annex 3)</p> <p>5.4.5.4. Submission form</p>