

SPECIMEN COLLECTION, TRANSPORTATION AND STORAGE

1. Samples of nasopharyngeal and oropharyngeal swabs

1.1 Personnel taking the samples

- The personnel taking the must be a registered medical practitioner who has attended training and has a certificate of attendance for Sample Taking and Handling Training for COVID-19 for General Practitioners and Paramedics from Private Health Facilities issued by the Family Health Development Division, MOH or State / Federal Health Department.
- Sampling can only be done by the Private Healthcare Facilities and Services registered or licensed under Act 586 at the premises or elsewhere that has been approved for the facilities by the Medical Practice Division, Ministry of Health Malaysia.

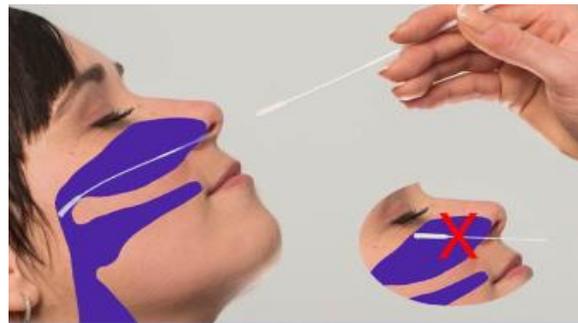
1.2 Personnel conducting the tests

- The personnel conducting the test procedure shall have a minimum Diploma in Medical Laboratory Technology .of at least 3 months.
- Adequate Training and competency in nucleic acid testing methods shall also be documented (etc logbook and competency assessment).
- The laboratory shall have qualified, skilled and experienced signatory (ies) to validate data and troubleshoot problems.
- Approved signatory (ies) shall have a degree or higher in medicine or basic science),trained and competent in the nucleic acid method , with at least one year or more laboratory working experience and 3 months experience in molecular testing.
- Personnel that can validate results are as following :
 - Pathologist
 - Medical Officer
 - Scientific Officer
 - Research Officer
- The lab should have at least one personnel that have qualifications in microbiology.

2. Technique For Specimen Taking

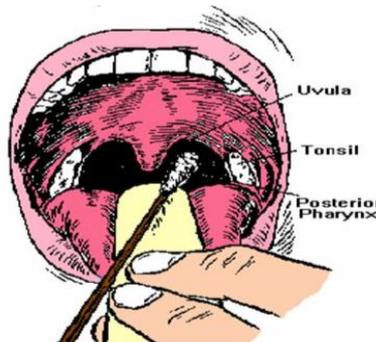
2.1 Technique for specimen taking Nasopharyngeal Swab (NPS)

1. Explain the procedure to patient
2. Bend the patient's head backward.
3. Swiftly insert the swab into the nostril. The depth of insertion is around 4-8 cm for children and 8-12 cm for adults.
4. Rotate the swab (3 to 5 times at 1 nostril) against the nasopharyngeal mucosa and remove the swab.



2.2 Technique for specimen taking Oropharyngeal Swab (OPS)

1. Ask the subject to open his or her mouth
2. Depress the tongue
3. Swab the posterior pharynx behind the tonsils
4. Avoid the tonsils



2.3 Technique for specimen taking Nasal Swab

1. Carefully insert the swab into patient's nostril. The swab tip should be inserted up to an inch from the edge of the nostril.
2. Dap along the lining of the nostril to ensure that both mucus and cells are collected. Turn the swab several times and remove the swab.
3. Repeat at the other nostril using the same swab tip.

2.4 Technique for Deep Throat Saliva, Oral fluid/ Saliva collection

a) Deep Throat Saliva collection

Patient must not eat or drink, smoke, chew tobacco/betel leaves, brush teeth or gargle with mouth freshener for at least 2 hours prior to the sample collection. Let the patient sit comfortably, in a well-ventilated space.

Methods of deep throat saliva collection

- i. Instruct patient to drain mucus from the back of the nose and throat at least 3 times
 - ii. Ask patient to forcefully breath in 3 times, with head tilt slightly up and cough out the deep throat saliva with mucus.
 - iii. If patient find difficulty with earlier method, they can be asked to collect the saliva in mouth and bring at deep throat then gargle it for >30sec.
 - iv. Ask patient to lift specimen collection cup close to his/her mouth and take a deep breath in and cough out or spit out the deep throat saliva into the collection cup.
 - v. A minimum of 2 ml of deep throat saliva sample is required.
- b) For saliva/ oral fluid collection for rapid test kit antigen (RTK Ag), please refer to Instruction for Use (IFU) in the product insert intended.

2.5 Technique for sputum collection

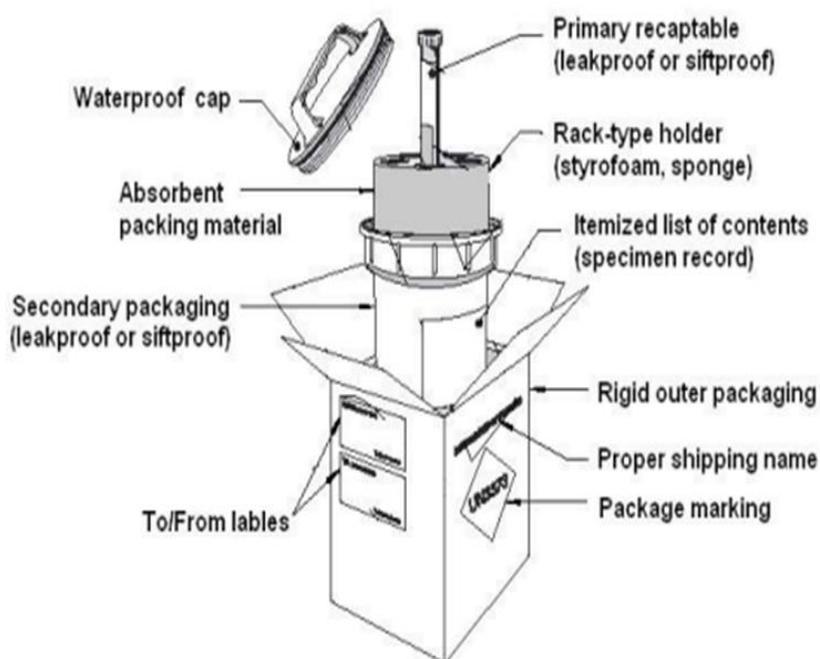
- a) Collect early morning specimen after rinsing the mouth and gargling with water
- b) Instruct the patient to cough deeply and expectorate only sputum and not saliva into the sterile screw-cap container

3. SPECIMEN CONTAINER, STORAGE AND TRANSPORTATION

Specimen	Container/ Transport Media	Storage
OPS NPS	For RT-PCR, combine NPS and OPS swab in 1 Viral Transport Media (VTM) As for RTK Ag place the swabs in dry container.	<p>➤ To send the samples immediately laboratory at 2-8°C</p> <p>-If transportation of samples is within 72 hours, store at 2- 8°C and transport in ice</p>
Nasal / NPS	As for RTK Ag place the swabs in container provided	
Sputum/BAL Saliva/ Oral fluid	Sterile Container	
Tissue	VTM or sterile container with few drops of normal saline	

Blood (Serology testing)	Plain Tube with gel		If delay in sending blood specimen, centrifuge and store at at 2-8°C
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4. TRIPLE LAYER PACKAGING



SOP for
Transport of
Biological
Specimens in
Malaysia 2012:
category B

- Leakproof primary container
- Secondary packaging- leakproof and watertight container with absorbent material
- Tertiary/ outer shipping box, rigid to protect specimens during shipment

NOTE:

1. Please avoid excessive packaging that is difficult to unpack.
2. Do not use any rubber band or sealed the gauze too tight. (This could cause hazard to laboratory staff when unpack the specimen using sharp material)



This picture above is an example for land transportation.

- **For airline shipment, please follow SOP for Transport of Biological Specimens in Malaysia 2012: category B**

4.1 Packaging for bigger quantity of samples.

- Place 1 sample per 1 biohazard plastic bag (secondary packaging).
- Secondary packaging can be grouped into 1 bigger plastic bag, not more than 20 samples each.
- The big packaging must be coded according to the name list to facilitate identification of the samples.
- Put the forms into plastic bag/envelope and it **MUST** be put it **OUTSIDE** the polystyrene box for biosafety purpose.



5. SPECIMEN SHIPPING AND TRANSPORTATION BY AIR

For transporting patient specimens cultures or isolates, **especially by air**, personnel must be trained in the proper safety, packing, and shipping regulations in accordance with the current edition of the Division 6.2, UN 3373 Biological Substance, Category B International Air Transport Association (IATA) Dangerous Goods Regulations (DGR) and SOP for Transport of Biological Specimens in Malaysia 2012.

Specimens should be shipped **at 2-8°C** with ice packs. The primary receptacle and the secondary packaging should maintain their integrity at the temperature of the refrigerant used as well as the temperatures and the pressures which could result if refrigeration were lost. Packages containing dry ice should be designed and constructed so as to prevent the build-up of pressure and to allow the release of gas that could rupture the packaging.

Ensure the outer package has been properly marked and labelled with the following:

- a) Hazard labelled with UN Identification Number already on label – UN 3373
- b) Biological Substance, Category B
- c) Shipper's name, address, and phone number
- d) Receiver's name, address, and phone number
- e) Name and phone number of a responsible person is optional if it is on the airway bill