



**ADVANCED DIAGNOSTIC LABORATORY (ADL)  
ADVANCED MEDICAL AND DENTAL INSTITUTE  
(AMDI), USM.**

**POLICY AND PROCEDURE OF SAMPLE  
HANDLING FROM PATIENTS TO RULE  
OUT COVID-19 IN IPPT**

Version 1/28 April 2020

## TABLE OF CONTENT

No.	Content	Page
	Table of content	
1	Objective	1
2	Scope	1
3	Definitions	1
4	Abbreviations	1
5	References	1
6	<b>Procedure for Handling of Specimen for Covid-19 Rt-qPCR Testing in Covid-19 Molecular Lab:</b> a. Procedure for Specimen Packaging (Triple-Layer Packaging) for Molecular Testing b. Procedure For Transportation of Throat/ Nasopharyngeal Swab Specimen to the COVID-19 LAB c. Rejection criteria of Specimen for Molecular Testing	 2 4 6
7	<b>Procedure for Handling of Specimen for Other Test in ADL (For Patient Who Need TRO COVID-19 Infection)</b> a. List of Other Tests Offered in ADL b. Specimen packaging (Modified Triple-layered Packaging) for chemical pathology, hematology and microbiology test c. Procedure for specimen transportation to ADL	 7 8 9

## 1. OBJECTIVE

- To provide procedure for handling of the specimen obtained from patient TRO Covid-19 infection (including OT screening cases), for the testing of:
  - a. Covid-19 molecular testing in Covid-19 Lab
  - b. Other tests (Chemical Pathology, Hematology, Microbiology) in ADL
- To define the roles of clinical and laboratory staff to ensure the handling of the specimen occur smoothly

## 2. SCOPE

This policy and procedure to be applied in IPPT ward/clinic and institution outside IPPT which are sending the samples obtained from patients who suspected to have infected with Covid-19 (PUI)/ OT screening cases for laboratory testing.

## 3. DEFINITION

Collecting centre: clinic/ hospital/ institution outside IPPT that perform sample collection and send the sample to IPPT Covid-19 Lab.

## 4. ABBREVIATION

PUI	- People under investigation
SARI	- Severe acute respiratory illness
ILI	- Influenza like illness
VTM	- Viral transport media
ADL	- Advanced Diagnostic Laboratory
OT	-Operation theatre
PIC	- Person in-charged


## 5. REFERENCE




- a. Garis Panduan Pengurusan COVID-19 di Malaysia No.5/2020
  - a. Annex 5a-GUIDELINES ON LABORATORY TESTING FOR COVID-19)
  - b. Annex 5b – LABORATORY TESTING FOR INPATIENTS
  - c. Annex 5c – TRIPPLE LAYER PACKAGING
- b. ADL user manual, version

**6. PROCEDURE FOR HANDLING OF SPECIMEN FOR COVID-19 RT-QPCR TESTING IN COVID-19 MOLECULAR LAB**

**a. Procedure For Specimen Packaging (Triple-Layer Packaging) for COVID-19 RT-qPCR Molecular Testing**

- Responsibility – this procedure is done by clinical staff (ward/clinic/collecting center)
- Notify ADL (microbiology lab) to obtain packaging kit prior to specimen collection

LAYER	PROCEDURE	PICTURE
<p><b>First layer</b></p>	<p>Label VTM patient's name, IC no and test name            ↓            Seal VTM with parafilm            ↓            Cover VTM with gauze            ↓            Tie with rubber ring            ↓            Insert into resalable biohazard bag</p>	

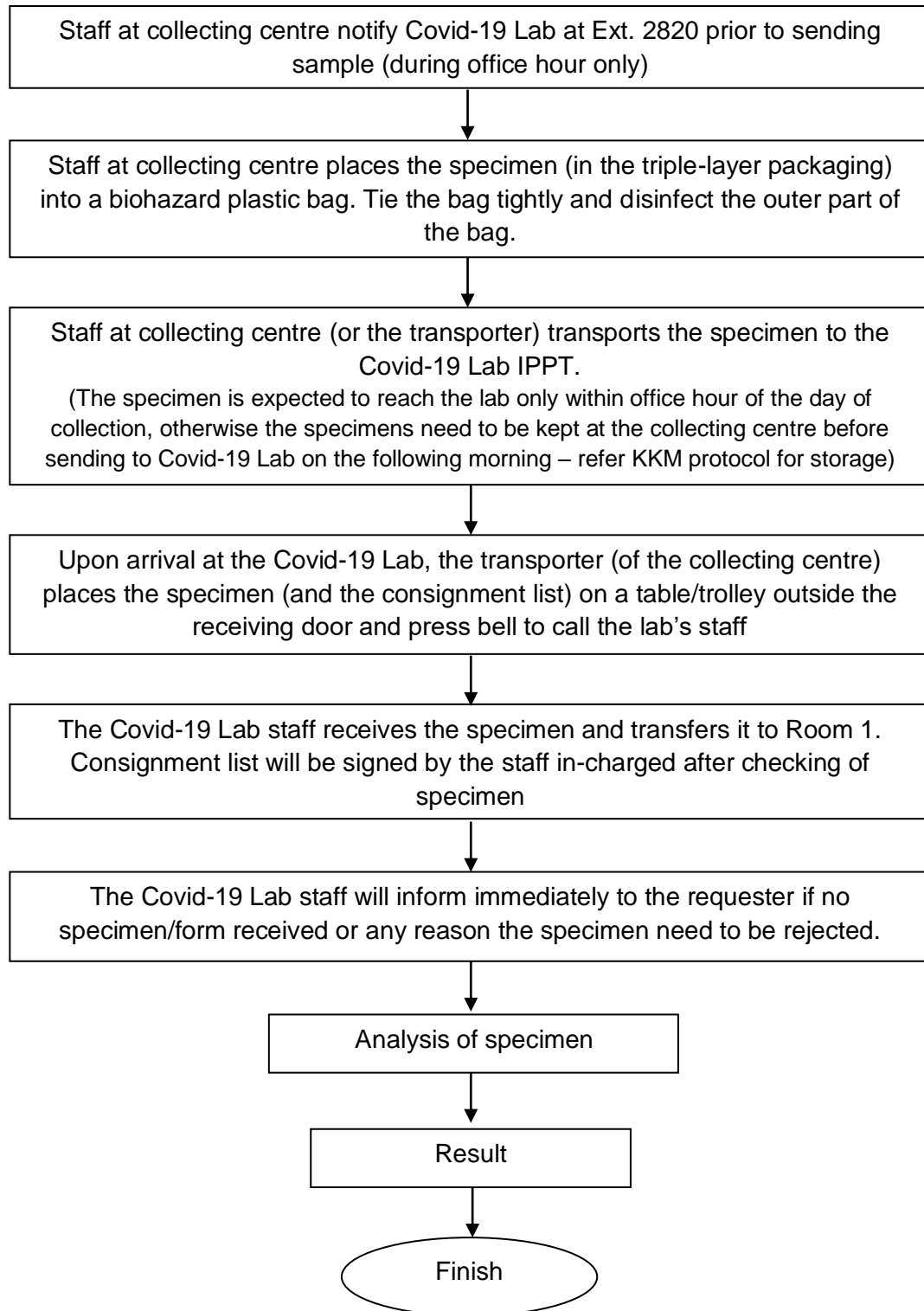
<p><b>Second layer</b></p>	<p>Put the VTM covered with biohazard plastic container into a clean, empty screw-capped container</p> <p>↓</p> <p>Wipes the outer part with disinfectant</p> <p>↓</p> <p>Label the container with patient's name, IC no and test name.</p>	
<p><b>Third layer</b></p>	<p>Put the container into polystyrene box</p> <p>↓</p> <p>Put in 3 ice pack into polystyrene box to maintain temperature of 2-8°C.</p> <p>↓</p> <p>Disinfect the outer part of the box</p>	
<p><b>Request form</b></p>	<p>Specify either Covid-19 positive/ PUI/ SARI/ ILI/ OT screening cases on top right of the form</p> <p>↓</p> <p>Place the request form* on the top of the polystyrene box</p> <p>*Form: ADL microbiology request form</p>	

**Note:**

- Please use Microbiology request form for request of Covid-19 RT-qPCR test
- The type of container used for second layer might be different from time to time due to shortage of supply. ADL will notify the changes to the requester during the supply of the triple layer kit to the requester.

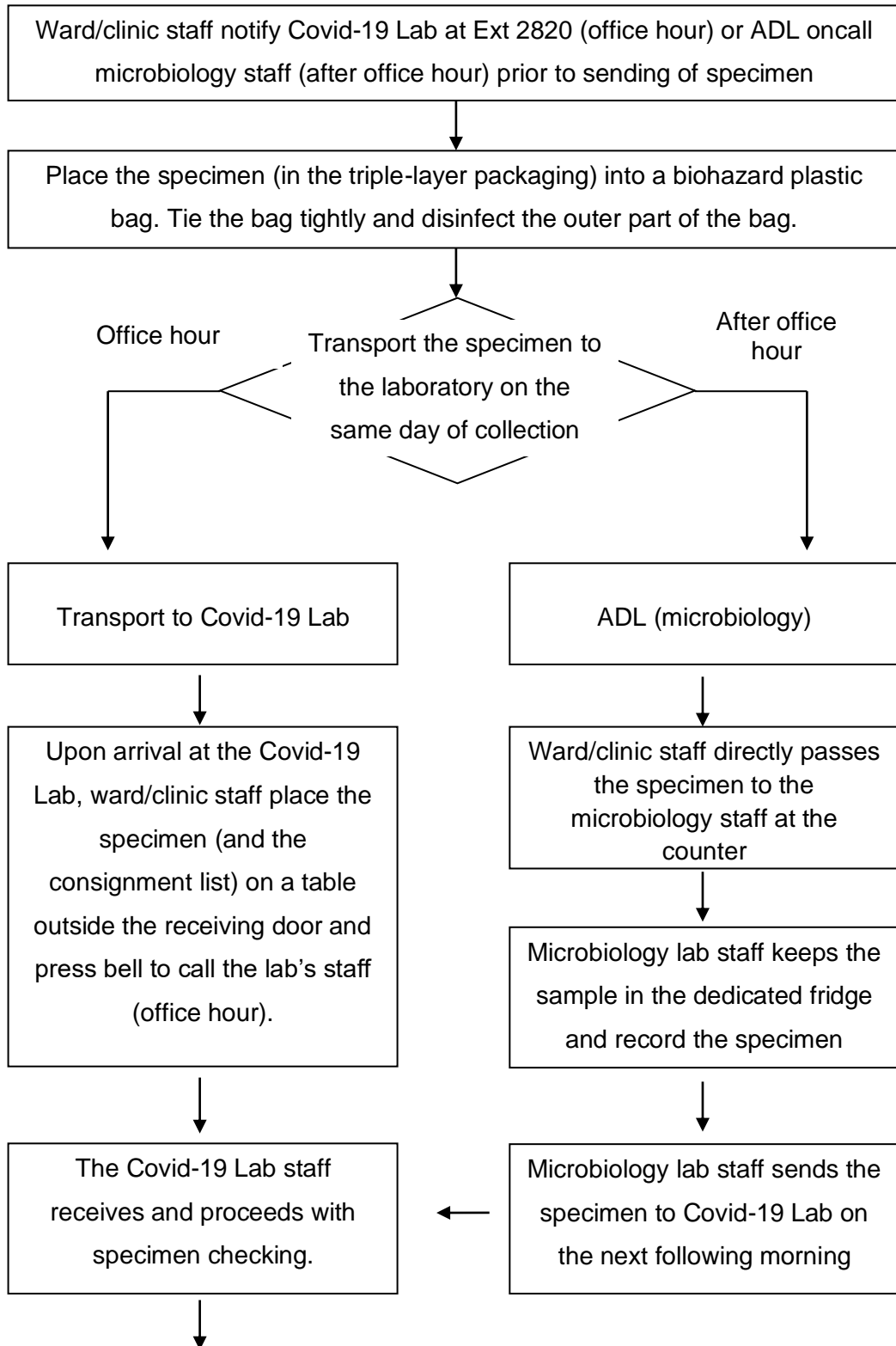
**b. Procedure For Transportation of Throat/ Nasopharyngeal Swab Specimen to the COVID-19 LAB**

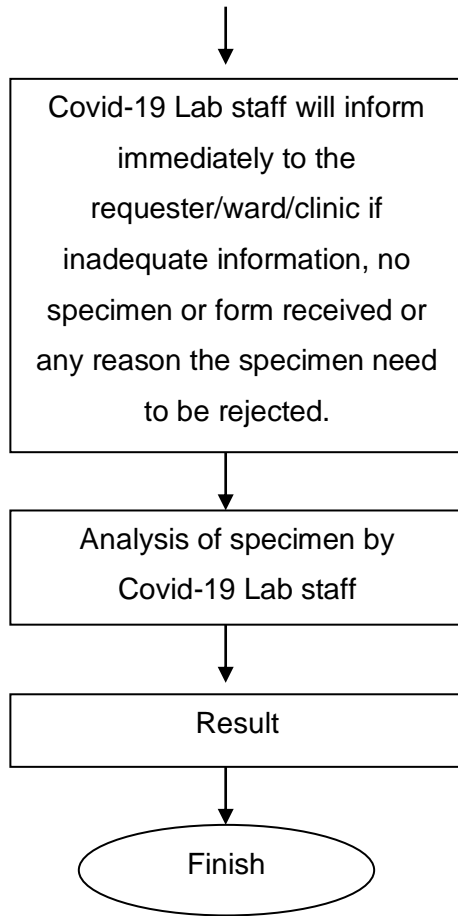
**Institution outside IPPT:**



**\*Positive result will be informed by Covid-19 Lab staff via phone to the respective centre**

**IPPT wards/clinics:**





**\*Positive result will be informed by Covid-19 Lab staff via phone to the ward/clinic**

**c. REJECTION CRITERIA (FOR MOLECULAR TESTING)**

- Specimen not sent in triple layer packaging
- Mismatch between information between specimen and request form
- Leak specimen container
- Specimen not labeled or mislabeled
- No specimen received



**7. PROCEDURE FOR HANDLING OF SPECIMEN FOR OTHER TEST IN ADVANCED DIAGNOSTIC LABORATORY (ADL)**

**a. List of Other Tests Offered in ADL For Patient Who Need TRO COVID-19 Infection**

<b>No</b>	<b>Tests</b>	<b>Lab</b>
<b>1</b>	<b>CHEMICAL PATHOLOGY</b> Renal profile, Liver function test, Calcium, Phosphate, Magnesium, Blood gas, Cardiac enzyme, Amylase, CRP	Chemical Pathology Lab, ADL
<b>2</b>	<b>HEMATOLOGI</b> FBC*	Hematology Lab, ADL
<b>3</b>	<b>MICROBIOLOGY</b> Blood Culture and sensitivity Dengue Rapid Test (NS1, IgM dan IgG) BFMP	Microbiology Lab, ADL

**Nota:**

- The test can be requested as usual way using Care2X
- Bagi permintaan ujian FBC dan ujian yang TIDAK tersenarai di atas, sila hubungi Pakar Patologi berkenaan terlebih dahulu.

**b. Packaging of Specimen Obtained From Patients Who Need TRO COVID-19 Infection (Modified Triple Layer Packaging)**

**(Call respective lab to obtain the polystyrene box prior to specimen collection)**

For Chemical Pathology, Hematology and Microbiology Tests

Layer	Content
First layer	Specimen tube <ul style="list-style-type: none"> <li>- Label with patient's ID</li> <li>- Seal with parafilm</li> <li>- Cover with gauze and tie with rubber band</li> </ul>
Second layer	Leak-proof sealed biohazard plastic bag <ul style="list-style-type: none"> <li>- Place the specimen into resealable biohazard plastic bag.</li> </ul>
Third layer	Leak-proof sealed biohazard plastic bag <ul style="list-style-type: none"> <li>- The first bag is placed into the second resealable biohazard plastic bag.</li> <li>- Disinfect the outer bag with disinfectant (alcohol 70%).</li> <li>- Label at the outer biohazard plastic bag with either "COVID-19/ PUI/ SARI/ ILI" whenever relevant</li> </ul>
Polystyrene box	<ul style="list-style-type: none"> <li>- Use polystyrene box (or dedicated box) to transport the specimen to the ADL</li> <li>- Disinfect the polystyrene box before transport to ADL</li> </ul>

**c. Procedure For Specimen Transportation To ADL (For Testing of Biochemistry, Hematology and Microbiology Tests)**

