
	Department of Biochemistry, JIPMER, Puducherry	Document Number: BC/COVID/SOP-1
	SOP for sample collection, transport, processing & disposal in COVID patients	
Version No. 1.3	Release Date: 23-04-2020	PAGE 1 OF 4

Adapted from ICMR-NIV/2019-nCoV/Specimens_02

1. **Scope:** To be used by clinicians/ health care personnel/ laboratory personnel for performing biochemical investigations in a suspected/ confirmed COVID patient.
2. **Purpose:** This document describes the information for collection, packaging, transport, handling, processing and disposal of a sample for Biochemistry investigations from a suspected/ confirmed COVID patient.
3. **Responsibilities:**
 - a. Appropriate sample (blood) has to be collected by clinician/ laboratory personnel/ health care worker trained in specimen collection in presence of clinician (if done by laboratory personnel/ health care worker).
 - b. Sample has to be transported to the laboratory after following packaging and transport guidelines for the clinician / health care worker along with a fully filled requisition form.
 - c. Laboratory personnel must strictly adhere to the sample reception, processing and disposal guidelines.
4. **General instructions:**
 - a. The resident in-charge of the analysers[in use and on stand-by] will ensure proper maintenance and quality control in the analysers.
 - b. Care should be taken not to contaminate the equipment keyboard, mouse and monitor. The outer pair of gloves have to be removed while handling equipment keyboard, mouse and monitor.
 - a. The dedicated laboratory staff must place the sample in the analyser for analysis and immediately remove it from the analyser after analysis. Sample shouldn't be left idle on the analyser rack loading system.
5. **Sample collection:**
 - a. Personal protective equipment (apron, hand gloves, goggles, mask etc.) need to be used and all universal biosafety precautions should be followed throughout the procedure.
 - b. A minimum of 2ml of blood must be collected in a clot activator tube (red cap) for biochemical investigations
6. **Sample packaging and transport:**
 - a. The primary sample tube must be securely capped and cleaned/ sterilised with an alcohol wipe or 0.5% Sodium hypochlorite.
The primary sample tube must be placed in a Ziploc pouch which should be securely sealed and cleaned/ sterilised with an alcohol wipe or 0.5% hypochlorite. Only one sample tube should be placed in one pouch in order to avoid cross contamination.
 - b. The sample tubes need to remain vertical all the time in order to avoid spillage. For this, the Ziploc pouches containing the sample tubes have to be placed inside another plastic

	Prepared By	Reviewed By	Approved By	Amendment	Amendment date
NAME	Dr. Rakchna M	Dr. Soundravally	Dr. Soundravally		
DESIGNATION	SR, Biochemistry	HOD, Biochemistry	HOD, Biochemistry	03	23-04-2020

	Department of Biochemistry, JIPMER, Puducherry	Document Number: BC/COVID/SOP-1
	SOP for sample collection, transport, processing & disposal in COVID patients	
Version No. 1.3	Release Date: 23-04-2020	PAGE 2 OF 4

box with a thermocol rack inside which could accommodate around 10 such pouches. The plastic box must be placed in a clean hard box/ thermocol box and closed securely for transport to the laboratory. Gloves must be changed while handling the box. Ensure that there is no contamination in the Ziploc pouch, plastic box and the transport box.

- c. Requisition form must be completely filled (name, age, gender, Hospital ID, ward, diagnosis, date and time of sample collection, type of sample, clinician's sign and seal, investigations required). Kindly do not contaminate request forms. Gloves have to be removed while handling forms. Forms SHOULD NOT be kept in the Ziploc pouch with the sample.
- d. The requests for the suspected COVID positive samples have to be sent with the seal COVID SUSPECTED.
- e. Sample must be transported to the laboratory as soon as possible and HANDED OVER to the laboratory personnel in person. Sample should not be left unattended in the reception area.
- f. The details of the person handing over the sample should be entered in the register at the laboratory by the person receiving the sample.
- g. Failure to follow any of the above steps will result in SAMPLE REJECTION.


7. Sample reception:

- a. One laboratory staff would be dedicated for processing and disposal of COVID samples for one week. The receipt of the sample and necessary entries should be done by any one of the lab personnel.
- b. A separate register will be maintained in the laboratory for COVID samples. All procedures from reception till disposal of the COVID samples will be documented in the same. The laboratory staff must ensure that all the samples handled by him/her is documented properly. The faculty in-charge of the clinical Biochemistry lab will supervise the documentation from time to time.
- c. The laboratory staff who is receiving the sample must ensure that the sample is properly packaged and the request form is complete. If not, the sample should be rejected immediately and handed over to the person bringing the sample after proper documentation both in the register and the form.

8. Sample processing:

- a. Sample will be processed by the dedicated laboratory staff. Personal protective equipment needs to be used and all universal biosafety precautions should be followed throughout the sample processing.
- b. After receiving the sample, the laboratory staff must immediately take the sample to the biosafety cabinet with the packaging intact.

	Prepared By	Reviewed By	Approved By	Amendment no	Amendment date
NAME	Dr. Rakchna M	Dr. Soundravally	Dr. Soundravally		
DESIGNATION	SR, Biochemistry	HOD, Biochemistry	HOD, Biochemistry	03	23-04-2020


	Department of Biochemistry, JIPMER, Puducherry	Document Number: BC/COVID/SOP-1
	SOP for sample collection, transport, processing & disposal in COVID patients	
Version No. 1.3	Release Date: 23-04-2020	PAGE 3 OF 4

- c. Sample packaging must be opened inside the biosafety hood and the outer surface of the sample tube must be wiped with an alcohol wipe. The sample must be placed in an upright position.
- d. After 30 minutes, the sample should be inspected for clot retraction and serum separation. If satisfactory, sample can be directly loaded into the analyser. If not, sample must be centrifuged. (Centrifugation is an aerosol generating procedure and maximum care must be taken during this step).
- e. After centrifugation, the samples have to be kept inside the centrifuge without opening the lid for 30 minutes.
- f. After 30 min, the samples will be transferred to the analyser sample cups which has to be carried out inside the biosafety cabinet.
- g. The suspected/ confirmed COVID samples will be processed in the COVID lab with the dedicated autoanalyzers.
- h. The sample cups will be placed in the analyser by the dedicated technician.
- i. The requests for the tests will be generated by the technician after removing the outer pair of gloves and disposing them off as mentioned below.
- j. After the analysis gets over, the technician should wear another pair of gloves for the disposal of the samples.
- k. Pipettes used for sample transfer must be immediately wiped with alcohol wipes.
- l. Separate sample racks will be dedicated for processing these samples. The racks would be periodically disinfected with alcohol wipes.
- m. Reports will be interpreted by the resident in-charge (to check for re-analysis/ dilution etc) and authorized by faculty in charge of Clinical Biochemistry in HIS.

Post – analysis procedures:

- n. After sample processing, post treatment with bleach as per standard protocol (ie., W2 with 0.5 % hypochlorite and photocal) must be done. Surface of the equipment should be wiped with alcohol sanitiser spray or 0.5 % hypochlorite solution.
- o. The covid section has to be disinfected with 1% sodium hypochlorite spray.
- p. After the analysis the sample tube has to be decapped. The remaining sample has to be poured into the bucket containing 1% sodium hypochlorite solution and kept for one hour. The remaining contents in the sample cups should also be poured into this bucket.
- q. The tips, empty cups and empty sample tubes used for the analysis have to be soaked in another container containing 1% sodium hypochlorite solution for one hour and have to be discarded into the red bag, pouring out the excess hypochlorite solution into the main bucket which can be drained off in the sink.

	Prepared By	Reviewed By	Approved By	Amendment	Amendment date
NAME	Dr. Rakchna M	Dr. Soundravally	Dr. Soundravally		
DESIGNATION	SR, Biochemistry	HOD, Biochemistry	HOD, Biochemistry	03	23-04-2020

	Department of Biochemistry, JIPMER, Puducherry	Document Number: BC/COVID/SOP-1
	SOP for sample collection, transport, processing & disposal in COVID patients	
Version No. 1.3	Release Date: 23-04-2020	PAGE 4 OF 4

- r. Some amount of 1% sodium hypochlorite solution needs to be poured into the red bag before placing it into another bag. The second red bag has to be labelled as COVID WASTE. This bag needs to be handed over to the Biomedical waste management team.
- s. After the analysis, the gloves, plastic apron and the goggles have to be discarded in to the red bag.
- t. After the analysis, the mask, gown, cap and shoe cover have to be discarded into the yellow bag.

For further clarifications, please contact:

1. SSB Biochemistry laboratory - 0413 229 7182
2. Dr. S. Kandasamy - 9442345675
3. Dr. Sharbari Basu – 9894119387
4. Dr. R. Soundravally - 9442214256

	Prepared By	Reviewed By	Approved By	Amendment	Amendment
NAME	Dr. Rakchna M	Dr. Soundravally	Dr. Soundravally	no	date
DESIGNATION	SR, Biochemistry	HOD, Biochemistry	HOD, Biochemistry	03	23-04-2020