		ICMR-National Institute Of Nutrition		SOP Number: ICMR-NIN / COVID19/ 04
Title	SOP for biological sample collection, packaging and transport from covid19 suspected/confirmed subjects			
Version 1.0	Prepared :09.6.2020	Effective from:10.6.2020	Valid Upto:31.12.2020	Page 1 of 4

1. **Scope:** To be used by clinicians/health care workers/laboratory personnel for performing investigations from a suspected/confirmed COVID 19 subjects

2. **Purpose:** This document describes information for collection, packaging and transport of a biological sample for investigations, from a suspected/confirmed COVID 19 subjects

3. **Responsibilities:**


- Appropriate sample has to be collected by clinician/ health care worker/ laboratory personnel trained in biological samples collection
- Sample has to be transported to the laboratory after following packaging and transport guidelines by the clinician / health care worker along with a fully filled requisition form.

4. **Materials required :**


N95 Masks, PPE Kits, Nitrile gloves, Alcohol based hand sanitizer(70%), alcohol swabs, 1% hypochlorite solution, Tourniquet, Syringes (5ml), Surgical spirit, Serum separation tubes (SST), Dry gauze piece/cotton balls, Plaster/band aid, Sample labels, Tube rack for SST, Hub Cutter, puncture proof sharps container, Needle destroyer, Cryovials (1.8ml) with inner thread, Cryoboxes Disposable Pasteur pipette, Parafilm tape, Thermoac boxes/Vaccine carriers, Plasters/cellotape, Biozard yellow bags, Marker pens.

5. **Sample collection:**

- Personal protective equipment (Apron, hand gloves, goggles, N95 Mask/ 3ply surgical mask etc.) should be used and all universal biosafety precautions should be followed throughout the procedure.
- Take consent on Consent form
- Ask the participant to sit comfortably
- Ask the participant to repeat his/her name and age
- Locate the site for venipuncture :Non-dominant hand ,Clearly visible vein, preferably median cubital vein .Free from skin lesions, injuries etc
- Apply a clean tourniquet around 4-5 finger breadths above the planned site of puncture
- Do not leave the tourniquet in place for more than 2 minutes
- Ask the patient to make a fist to make the veins more prominent
- Put on well-fitting, non-sterile gloves. (Use a new pair for each participant)

 ICMR-National Institute Of Nutrition		SOP Number: ICMR-NIN / COVID19 / 04
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Version 1.0	Prepared:09.06.2020	Effective from:10.6.2020 Valid Upto:31.12.20
Page 2 of 4		

- Using an alcohol swab soaked, clean the venipuncture site by rubbing in a circular fashion, moving from centre to periphery, over a 2 cm area, for 30 seconds
- Allow the site to dry for 30 seconds
- Do not touch the site or palpate the vein after disinfection; if touched, disinfect again
- Use a 23G needle attached to appropriate syringe (2ml/5ml/10ml) as the case may be
- Anchor the vein by pressing down on skin about 2 inches below the site of puncture
- Pierce the skin at an angle of about 30° and enter the vein
- Stabilize the syringe by holding on the syringe and collect 5 ml of blood
- Release the tourniquet
- Withdraw the needle gently
- Place a gauze piece on the puncture site and the palm fist may be released.
- Ask the participant to keep the hand flexed (folded) and press down at the site of puncture for a few minutes
- Transfer the sample into serum separation tubes (yellow topped tube)
- Pierce the cap of the yellow-topped tube with the needle
- The sample will flow into the tube under the effect of vacuum
- If blood remains in syringe after flow has stopped, gently push the piston of syringe to move remaining volume
- Using the needle destroyer/hub cutter, cut the needle
- Immediately put the remains of the syringe into the sharps container
- If any blood spilled during collection, clean surface using alcohol wipe
- Discard the cotton swabs and gauze piece and any other contaminated material into the biohazard disposal bag (red bag)
- Discard non-contaminated material (e.g., wrappers of syringe, needle caps etc.) into the black bag

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Version 1.0	Prepared: 09.06.20	Effective from:10.6.2020 Valid Upto:31.12.20 Page 3 of 4


- Tie and seal each red and black bag with cello tape
- Take the red and black bags to the district laboratory for terminal disinfection/ disposal
- Remove the gloves and perform hand hygiene with hand sanitizer

6. **Sample packaging and transport:**

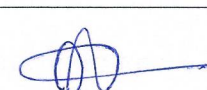
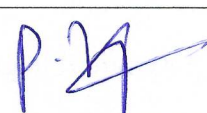

- Sample containers should be watertight and leak-proof.
- If the sample container is a tube, it must be tightly capped and placed in a rack to maintain it in an upright position. Sample containers and racks should be placed in robust, leak-proof plastics or metal transport boxes with secure, tight fitting covers.
- The transport box should be secured in the air conditioned transport vehicle.
- Each transport box should be labelled appropriately consistent with its contents, date, time
- Sample data forms and identification data should accompany each transport box.
- A spill kit containing absorbent material, a chlorine disinfectant, a leak-proof waste disposal container and heavy duty reusable gloves should be kept in the transport vehicle.
- Maintain the cold chain procedure during the transportation (4-8 C) of the samples to lab.

7. **Sample reception:**

- Consider all samples received in the laboratory as “Potentially infectious” and to handle appropriately.
- Check whether all samples are proper and labelled clearly.
- Designated laboratory staff should be allotted for reception of the samples..Body temperature of the person handing over the samples should be checked if possible

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Version 1.0	Prepared:09.06.20	Effective from :10.06.2020	Valid Upto:31.12.20	Page 4 of 4

- A separate register should be maintained for the laboratory samples. All procedures from reception till disposal of the 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 will supervise the documentation from time to time
- Check whether all sample collected in appropriate anti-coagulated vials are further placed in a secondary container (zip lock bag/ small plastic container) to minimize the potential breakage or spill. All these containers should be received in a large plastic box with biohazard label and warning.

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