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Guidelines for storage of respiratory specimens collected for COVID-19 diagnosis by RT PCR platforms in Government laboratories

1. In the ongoing laboratory testing for COVID-19 diagnosis by molecular diagnostic methods, clinical specimens or a subset of the clinical specimens may need to be retained for various purposes such as performing additional tests, for quality control purposes or for use as control materials to assess newer diagnostic tests. In addition, a laboratory may need to store specimens for projects aimed at studying genomic epidemiology of the SARS CoV2 virus across regions and over time.
2. All samples being stored for a long-term must be appropriately labelled indicating laboratory identifiers, date of sample collection and must be stored in properly functioning -80°C deep freezers. A proper inventory (preferably electronic) of stored samples should be essentially maintained.
3. With the surge in testing across the country, the total number of tested samples has gone up considerably. Keeping this in view, ICMR advises of the following.
 - a) Laboratories that are serving as validation centres for COVID-19 diagnostic kits are advised to preserve adequate numbers of positive and negative samples to prepare appropriate panels for validation etc.
 - b) At a minimum, all samples testing positive for SARS CoV2 must be retained for at least 30 days from the date of testing before being destroyed. Depending on the freezer space availability in a particular laboratory, one or more aliquots of the positive specimen may be retained for the period.
 - c) A government laboratory may decide on the number of positive / negative samples to retain in the long term based on the availability of freezer space as well as perceived research agenda of the laboratory for COVID-19 in the future.
 - d) If the number of samples tested positive at a laboratory is considerably large and the laboratory is unable to retain all positive samples beyond 30 days, a minimum of 10% of all positives detected at the laboratory in a month or 40-50 positives preferably with equal numbers of high, moderate and low viral load should be stored for a period of 1 year at the least. A single aliquot of a positive sample may be retained taking into account freezer space availability at the laboratory.



- e) Considering that the number of samples tested negative at each laboratory will vary depending on the sample load and testing capacity of the laboratory, a minimum of 50 samples or 1-2% of all negative tested samples over a month, whichever is smaller should be retained at the testing laboratory for a period of 1 year. A single aliquot of a negative sample may be retained taking into account freezer space availability at the laboratory.
- f) All labs will send 5 random positive and 5 random negative samples per month to QC labs. ICMR has mapped COVID-19 testing labs to different QC labs (Annexure I). All testing labs should liaise with the recommended QC labs and will ensure regular participation in QC activity.
- g) All testing labs will ensure storage of samples at -80°C and will ensure regular monthly transfer to QC labs. Don't forget to include your lab name and sample ID. While shipping, place samples in screw capped vials and proper Biosafety and Biosecurity precautions should be followed as per IATA guidelines.
- h) In case of any discordance, additional 5 positive and 3 negative samples will need to be sent for QC check.
- i) If QC results are concordant, all the QC samples may be destroyed and labs will keep record of destruction.
- j) Appropriate procedures to disinfect all samples prior to disposal must be followed.



Annexure I

QC lab	Government Testing Labs
RMRC, Dibrugarh Contact: Dr. Biswa Borkakoty, Email: biswaborkakoty@gmail.com	Assam, Manipur, Mizoram, Meghalaya, Nagaland, Tripura
SVMS, Tirupati Contact: Dr. Usha Kalawat, Email: ukalawat@yahoo.com	Andhra Pradesh, Telangana
RMRC, Port Blair Contact: Dr. Paluru Vijayachari Email: vijayachari@paluru@gmail.com	Andaman and Nicobar Islands
RMRIMS, Patna Contact: Dr. Pradeep Das, Email: drpradeep.das@gmail.com	Bihar
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AIIMS, New-Delhi Contact: Dr. Lalit Dar, Email: lalitdaraiims@gmail.com	Delhi
BJMC, Ahmedabad Contact: Dr. M.M. Vegad, Email: mahendravegad@rediffmail.com	Gujarat
BPS, Sonapat Contact: Dr. Sarita Yadav, Email: yadav78sarita@yahoo.com	Haryana
RIMS, Ranchi Dr. Manoj Kumar, Email: icmrvirologyrim@gmail.com	Jharkhand
SKIMS, Jammu and Kashmir Dr. Bashir Fomda Email: bashirfomda@gmail.com	Jammu and Kashmir, Ladakh
AIIMS, Bhopal Dr. Debasis Biswas, Email: debasis.microbiology@aiimsbhopal.edu.in	Madhya Pradesh
NIV Field unit, Bengaluru Contact: Dr. Ashok Email: ashokmniv@gmail.com	Karnataka



QC lab	Government Testing Labs
NIV Field unit, Allapuzha Contact: A.P. Sugunan, Email: apsugunan@gmail.com	Kerala, Lakshadweep
Kasturba Hospital for Infectious Diseases, Mumbai. Contact: Dr Jayanthi Shastri, Email: jsshastri@gmail.com	Mumbai
NIV, Pune Contact: Dr. Varsha Potdar Email: potdarvarsha9@gmail.com	Rest of Maharashtra, Goa, Dadra and Nagar Haveli
RMRC, Bhubaneswar Contact: Dr. Jyoti Turuk Email: drjyotirmayuturuk@gmail.com	Odisha
PGI, Chandigarh Contact: Dr. Mini Singh Email: minipsingh@gmail.com	Chandigarh, Punjab, Himachal Pradesh
JIPMER, Puducherry Contact: Dr. Rahul Dhodapkar Email: rahuldhodapkar@gmail.com	Puducherry
GMC, Haldwani Contact: Dr. Vinita Rawat, Email: drvinitarawat@gmail.com	Uttarakhand
SMS Medical College, Jaipur Contact: Dr. Bharti Malhotra, Email: drbhartimalhotra@gmail.com	Rajasthan
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KGMU, Lucknow Contact: Dr. Amita Jain, Email: amita602002@yahoo.com	Uttar Pradesh
NICED, Kolkata Contact: Dr. Shanta Dutta Email: shanta1232001@yahoo.co.in,	West Bengal, Sikkim