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Department of Health Research, Ministry of Health
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Advisory on use of Dry Swab RNA Extraction Free RTPCR Method

- CSIR-CCMB Hyderabad has developed RNA extraction free dry swab method for RTPCR based detection of SARS-CoV-2. The method will save time and reduce cost as compared to standard PCR test using Viral Transport Medium (VTM) and RNA extraction.

- This method involves collection of a VTM less dry oropharyngeal / nasopharyngeal swab from suspect SARS-CoV-2 patients. The swab is then transported to the lab wherein Tris-EDTA - Proteinase K buffer is added, and the sample is incubated for 30 minutes at room temperature. The sample is then subjected to heat inactivation at 98◦C for 6 minutes. The extract is then used for RTPCR. Comparative methodology with flow diagram is attached herewith.

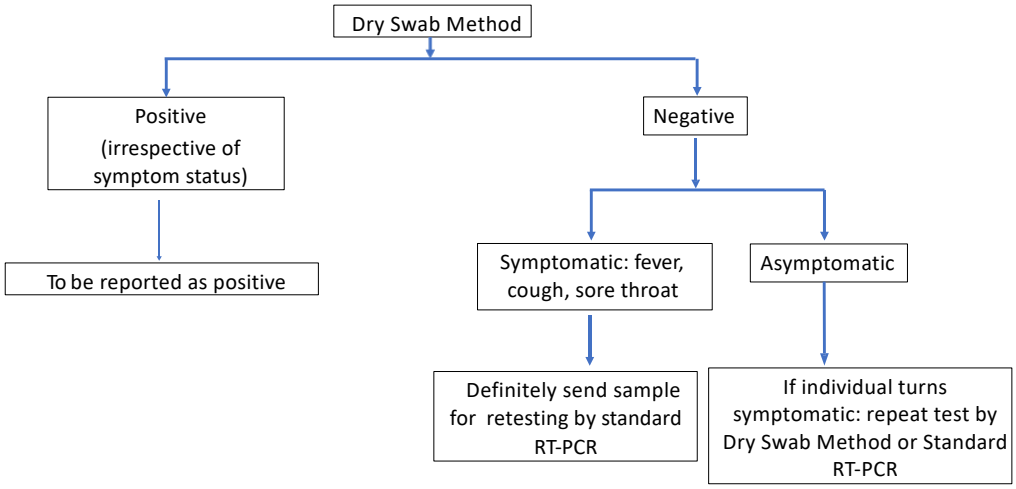
- ICMR conducted two validations of the dry swab method in August and November 2020 respectively. The earlier one with the original version and the latter one with modifications based on the results of the first validation.

- Results indicate that the sensitivity of the dry swab variant method is 79% and specificity is 99% when compared with standard RTPCR test as the gold standard.

- Considering its **lesser cost and quick turn-around,** the dry swab variant method can be used as a **screening tool only in settings where automated RNA extraction is not available.**

- Algorithm for use of dry swab variant method test is given below:

Algorithm for COVID-19 test interpretation using Dry Swab RNA Extraction Free RTPCR Method



- *All positive and negative results should be entered into the ICMR portal on a real time basis after performing the Dry Swab Test.*
- *Results of samples subjected to standard RT-PCR should be entered after the standard RT-PCR results are available.*

Scheme of Comparison of Standard RTPCR (with VTM tube) and Dry Swab RNA Extraction Free RTPCR Method