

# Chapter 10

## COVID19 Rapid Diagnostic Kits



Apart from the treatment options, protocols and preventive measures against COVID, an essential step prior to the treatment is its quick and accurate diagnosis. There are several diagnostic protocols prevailing currently for the identification of COVID infection. The Gold standard available diagnosis is based on the identification of pathogen by RTPCR analysis [1]. This involves extraction of the genetic material of the virus followed by its amplification using specific primers and identification. This is the most sensitive and accurate protocol but involves high expertise and time. Thus the research was focused towards identification of Rapid testing kits which requires less time and not much expertise in handling the procedure. It is a simple KIT based method which involves the identification of specific antibodies in the blood of the tested individual against the antigens of Novel Corona Virus. The results of these tests are not as accurate as the PCR approach, yet it can be a good solution for testing huge population size and emergencies.

As of 6 March 2020, WHO listed the development laboratories and protocols for detection of virus as follows (Table 10.1).

### 10.1 Principle and Working of LabCorp COVID19 RT-PCR Test Kit

LabCorp COVID-19 RT-PCR test Kit is one of the most widely accepted kits because of its authenticity and validity. This kit is EUA [3] ie Accelerated Emergency Use Authorization kit. The kit is based on the RT PCR analysis of the Clinical specimens that are obtained from the nasal and throat swabs. This RT PCR based test kit performs the qualitative detection of nucleic acids from the upper and lower respiratory specimen of SARS CoV 2. Some of the specimen used for testing includes nasopharyngeal sample, oropharyngeal swabs, aspirates from lower respiratory tract, sputum, bronchoalveolar lavage and nasopharyngeal aspirate.