Rapid Antigen Test for COVID-19

1. What is rapid antigen test for COVID-19 (rapid antigen test)?

Rapid antigen tests are designed to directly detect SARS-CoV-2 virus proteins (antigens) in respiratory specimens. There are different manufactured tests currently available on the market. Most of them require nasal or nasopharyngeal swab samples or deep throat saliva samples. The test is easy to perform and the testing results are usually available within 30 minutes. At present, most rapid antigen tests are intended for being administered by trained professionals, but some can be done in home setting.

2. What is rapid antigen test used for?

Rapid antigen tests can only serve as a reference and cannot replace the nucleic acid test which is at present the gold standard for diagnosis of COVID-19.

Notwithstanding its limitations, rapid antigen tests may play a role in facilitating access to testing and earlier diagnosis in some people.

If you have COVID-19 symptoms, please seek medical advice and perform testing according to advice of medical professionals.

3. How to choose a suitable test?

The World Health Organization recommends the tests to have a minimum sensitivity of 80% and specificity of 97%.

Read the product information carefully and understand the type of sample and method of collection required for the test before purchase. If in doubt, please seek advice from healthcare professionals.

4. How to perform and read the test?

Pay attention to and follow the instructions from the manufacturer to perform the test and read the test result properly. If you need to record the test result, take a photo of the test result immediately after reading the test.

Observe personal hygiene and environment hygiene while taking the respiratory specimen. Wash hands before and after performing the test. Minimize non-essential items in the specimen collection area. Collect the sample in a well-ventilated place, and keep a distance of at least 2 metres from other people if collecting the specimen at a place in the absence of other persons is not possible. If the environment is contaminated during the process, clean the environment with 1 in 49 diluted bleach solution. For metallic surfaces, use 70-80% alcohol to disinfect the area.

More information on Infection Control Advice on Specimen Collection to Test for COVID-19 can be found in the following website:

https://www.chp.gov.hk/files/pdf/advice_on_specimen_collection_to_test_covid_19_eng.pdf

5. What to do if test result is positive?

When positive result (including vaguely positive with a faint band showing on the test kit) is obtained, one should immediately seek medical attention for follow up management.

6. What to do if test result is negative?

A negative test result does not exclude COVID-19 infection. One should continue practising prevention and control measures of COVID-19. If there is suspicion of COVID-19 infection, medical attention should be sought promptly.

7. **What to do if test result is invalid?**

If there is no band appearing in the control region, the test result is invalid. One should check whether the sample type, sample collection method and testing method are correct according to the instructions provided by the manufacturer. If not, repeat the test with correct methods with a new device. If no problem is identified, one may also repeat the test with a new test device. If in doubt, please seek medical assistance.

8. How to dispose of the materials after the test?

Respiratory specimen is a kind of body fluid and is potentially infectious. Therefore, they should be handled with care and disposed of carefully.

After conducting the test, wrap and seal all the product components of the testing kit carefully and dispose properly according to manufacturers' instructions. Wash hands properly afterwards.

More information on Infection Control Advice on Specimen Collection to Test for COVID-19 can be found in the following website:

https://www.chp.gov.hk/files/pdf/advice_on_specimen_collection_to_test_covid_19_eng.pdf

9. What is the limitation of the test?

Rapid antigen tests are known to have limitations on their limit of detection and have lower sensitivity as compared with nucleic acid tests. In addition, a positive result can actually be false positive and the positive predictive value is especially low in a low prevalence setting.

Inappropriate self-collection of specimen and self-performance of the rapid antigen test may also affect the sensitivity and reliability of the results, e.g. false negative results. A negative test result cannot completely exclude COVID-19 infection. A false negative result may be

obtained when the level of antigen in the sample is below the detection limit of the test, when sample type / collection is improper, or when the test is performed incorrectly.

This test performs better in patients with high viral loads during the pre-symptomatic (1-3 days before symptom onset) and early symptomatic phases of the illness (within the first 5-7 days of illness). The chance of having false negative result will be higher 5-7 days after the onset of symptoms.