

A test for rapid diagnosis of SARS-CoV-2 infection

- The test detects viral antigen by immobilized coated SARS-CoV-2 antibody on the device.
- Test results can be interpreted without specialized instrument and available within few minutes
- The test can relieve the workload in diagnostic hospitals and laboratories and improve the turn-around time
- Saliva is the starting specimen for the test

How does the salivary test work?

- The salivary test is very quick: three to five minutes are enough to get the result
- It is also absolutely non-invasive: just requires a minimum amount of
- The collection of saliva is by mouth. There is no need to use much more invasive nasopharyngeal swabs
- Its operation, designed to be intuitive and within everyone's reach, is similar to that of a pregnancy test: the saliva flows on the plate in special channels (capillary beds) and due to an immunochemical reaction, bands are formed and visible to naked eye

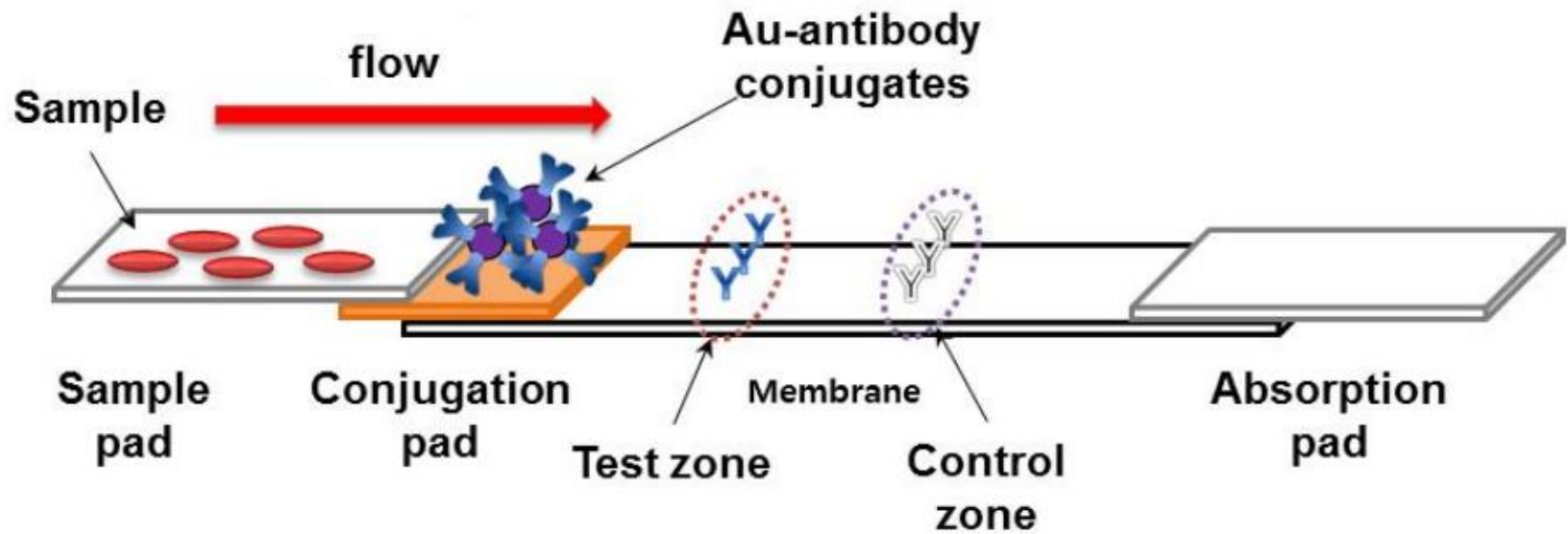
How does the salivary test work?

- Unlike serological tests, which measure the body's response to infection by measuring the antibodies against SARS-CoV-2 produced by the human body, the salivary test **directly measures the presence or absence of Coronavirus**, just like the swab does
- The salivary test cannot replace the classic swab, but it is a very useful tool for rationalizing
- its use addresses to the tampon only those subjects who have tested positive
- this will avoid problems such as overcrowding in the emergency rooms by suspected symptomatic patients.

How does the salivary test work?

- Specifically, the salivary test is a "Lateral flow" type test, an immunochromatography technique on a solid support in which a fluid (in this case saliva) flows on a strip with capillary transport beds, crossing four zones:
- The "**Sample Zone**", where saliva is deposited;
 - The "**Conjugate Zone**", in which specific antibodies directed against the Coronavirus glycoprotein are present in stoichiometric excess. These antibodies are also conjugated with colloidal gold nanoparticles
 - The "**Reading Zone**", where there are additional Ab directed against the Coronavirus. In this area, the previous immune complexes still react and form a second complex. These new products will be arranged in an orderly row, thus drawing the first colored strip of the test (due to the tight alignment of the colloidal nanoparticles).
 - The "**Control Zone**": it presents some Ab directed against the Ab of the conjugated zone: they will react by forming the second colored line.

Principle of the test



Mixing and analyzing saliva

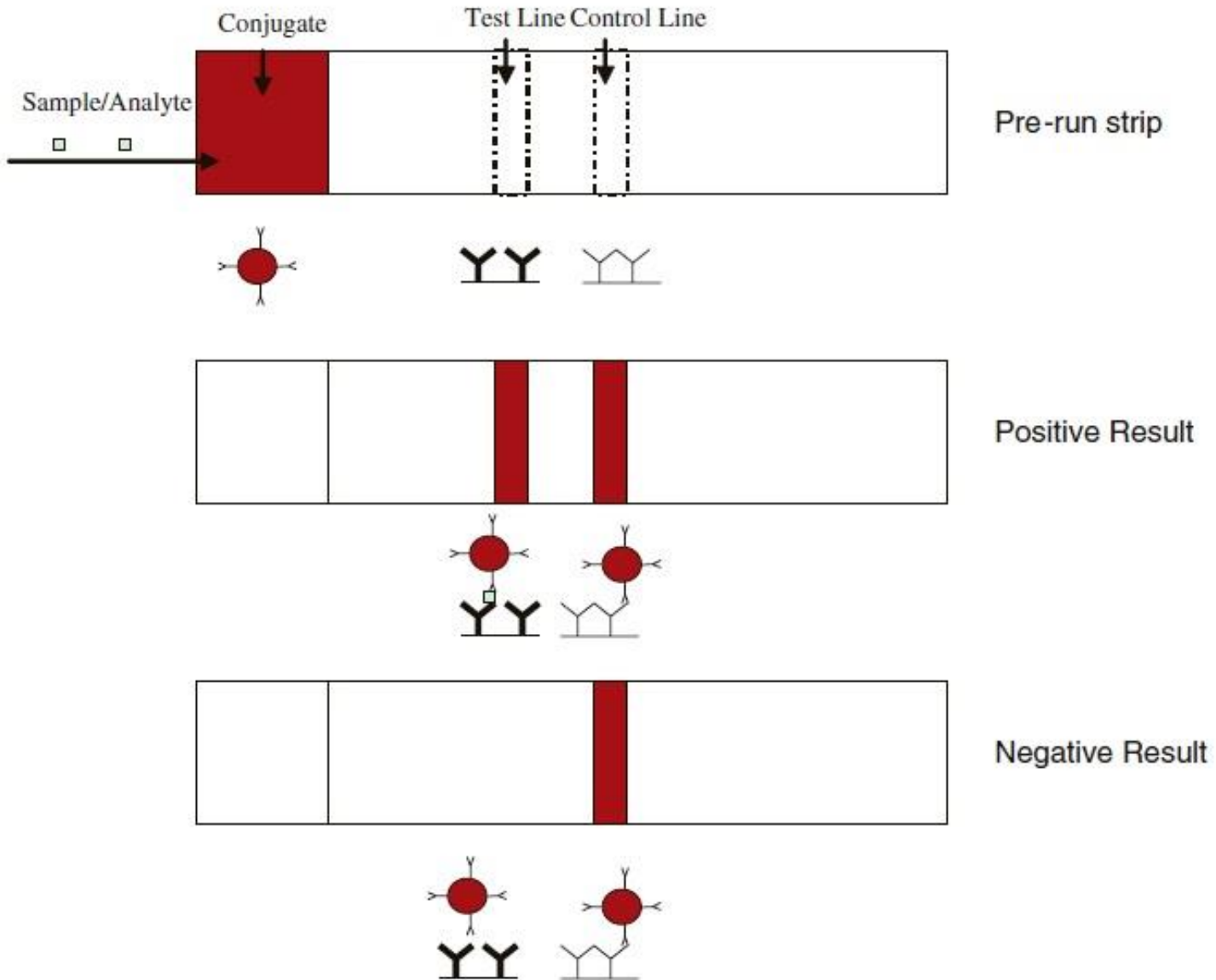


Elute the swab by swirling in the reaction tube

Close the reaction tube

Analyze one drop of the reaction mixture and wait 3-5 min

Test interpretation



Benefits

- Many persons can be tested in few minutes
- **Infectious persons can be discovered in real time: 3-5 minutes**
- Fewer cases of false positives
- **Very low cost, for daily use**
- **Non-invasive**

Where and how to use it

- Every day when students enter schools
- In the emergency rooms
- At the entrance of public places
- At every access to stadiums, restaurants, theaters, etc.
- Exactly as if it were a thermal detector, but much more specific