



## Coviself: Self Testing Kit

---

 [drishtias.com/printpdf/coviself-self-testing-kit](https://drishtias.com/printpdf/coviself-self-testing-kit)

### Why in News

---

Recently, the Indian Council of Medical Research (ICMR) approved India's first **self-use Rapid Antigen Test (RAT) for Covid-19** named as **CoviSelf**.

- It is developed by **MyLab Discovery Solutions**, a Pune-based molecular company.
- **ICMR** is the **apex body in India** for the formulation, coordination and promotion of biomedical research, and is **one of the oldest medical research bodies in the world**.

### Key Points

---

#### About:

- It **uses a RAT** and gives **results within 15 minutes**. This test is **synced with a mobile app**, CoviSelf, which will **help directly feed the positive case's report on the ICMR portal**.
- ICMR has advised this **test only for those who have symptoms or are high-risk contacts of positive patients** and need to conduct a test at home.
- This test is **not advised for general screening in public places** of hawkers, show owners, or commuters.

### Rapid Antigen Test

- It is a **test on swabbed nasal samples that detects antigens** (foreign substances that induce an immune response in the body) that are found on or within the **SARS-CoV-2** virus.
- It is a **point-of-care test**, performed outside the conventional laboratory setting, and is used to quickly obtain a diagnostic result.

- Like **RT-PCR (Reverse Transcription Polymerase Chain Reaction)**, the RAT too **seeks to detect the virus** rather than the **antibodies** produced by the body.
  - While the **mechanism is different**, the most significant **difference between the two is time**.
  - In an RT-PCR test, **RNA (Ribonucleic acid)** is extracted from the swab collected from the patient. It is then converted into **DNA (Deoxyribonucleic acid)**, which is then amplified.
  - RT-PCR test takes a minimum of 2-5 hours whereas the maximum duration for interpreting a positive or negative test in RAT is 30 minutes.
  
- **Benefits of Self Testing:**
  - **Cost Effective:**
    - Swab collection in this case is fairly simple and quick, and **reduces overall testing expenditure** and the **stress of booking appointments** in labs.
    - It is **cheaper than RT-PCR and a RAT** in the laboratory.
  - **Reduced Risk of Transmission:**
    - A person testing himself at home rather than visiting a hospital or lab, or calling a technician at home, **reduces the risk of transmission to others**.
    - Reliable self-collection and self-testing will **reduce population movement, reduce Covid-19 exposure risk**.
  - **Reduced Burden:**

Self-testing will **reduce the burden on laboratories that are currently working 24 hours** up to full capacity with manpower that is already saturated.
  - **Mass Surveillance:**

Cheap rapid tests can **help in accomplishing the aim of mass surveillance** even if their sensitivity to capture accurate results are inferior to other tests.
  
- **Concerns:**
  - **Reliability:**

The reliability of results remains a major concern. The likelihood of the **sample not being collected correctly, or the swab stick getting contaminated, is high**.
  - **False Sense of Security:**

RAT comes with a **high chance of false negatives**. If a Covid-infected person is asymptomatic and tests negative, the test may give a **false sense of security**.
  - **Challenge to Response Measures:**

**Shifting the responsibility** of reporting test results **from health professionals and laboratories to individuals** could lead to **underreporting**, and **make response measures** such as contact tracing and quarantine of contacts even **more challenging**.

## Way Forward

---

- Self-tests **can be effective if the patient follows isolation norms**, feeds correct data and is able to interpret the results accurately.
- However while a RAT serves **as a quick mass surveillance tool, over-dependence on it for testing is not advisable**. It can supplement, not form, the bulk of testing.

**Source:IE**