Singapore's Covid-19 Breathalyzer Tests Give Results Within Minutes

BY JAMES LEE  |  SINGAPORE  |  JUN 23RD 2021  |  2 MINS

Singaporean HealthTech startups Breathonix and Silver Factory Technology are leading the charge on rapid testing with their Covid-19 breathalyzer test.
Singapore’s Health Sciences Authority has given the BreFence Go Covid-19 test provisional approval, NUS said in a statement. Silver Factory Technology is working with the National Centre for Infectious Diseases (NCID), and has begun testing the TracieX breathalyzer at Changi Airport.

The greenlit breathalyzers work in the same way that standard alcohol breathalyzer tests do: a person blows into a disposable single-use mouthpiece connected to a spectrometer, and an algorithm analyses compounds and chemicals in the person’s breath, returning test results in less than a minute.

A Singapore-based pilot clinical trial consisting of 180 study participants has found that Breathonix’s Covid-19 breathalyzer test achieves over 93% sensitivity and 95% specificity in detecting the virus. Additional clinical trials, one in Singapore and another in Dubai, have also been conducted. The TracieX test’s sensitivity rate is over 95%, and its specificity rate over 99%.

While the breathalyzer test has been confirmed to provide highly accurate results within 60 seconds, individuals who test positive in the breath test have to be screened in a confirmatory polymerase chain reaction (PCR) swab test, the company said.

Breathonix is currently in talks with local and overseas organisations to use the test, citing commercial interest. Depending on the amount purchased, the BreFence Go tests are sold for US$3.75 to $15, while the TracieX Covid-19 test costs around US$20 each.

Efficient Covid-19 testing could be key to reviving Singapore’s travel sector that has stagnated as a result of the ongoing pandemic. Despite the “Covid-zero” status of numerous Asian countries, governments have been hesitant to open borders, and have implemented policies to stem any influxes in transmission. Singapore’s Ministry of
Heath has used the BreFence Go system to test travellers at the Tuas Checkpoint between Singapore and Malaysia. For both breathalyzer systems, a negative test is required to enter the city-state, and further PCR testing will be carried out upon a positive test result. Singapore will also continue to screen entrants with antigen rapid tests alongside the breathalyzers.