

NEW ZEALAND (/NEWS/NATIONAL) / COVID-19

Covid-19: Limited testing kits has scientists searching for generic alternative

COVID
7 April 2020

5:34 am on 7 April 2020

Charlotte Cook (/authors/charlotte-cook), Journalist

[@charlottecooknz](https://twitter.com/@charlottecooknz) (<https://twitter.com/@charlottecooknz>) [✉ charlotte.cook@rnz.co.nz](mailto:charlotte.cook@rnz.co.nz)

([%20Limited%20testing%20kits%20has%20scientists%20searching%20for%20generic%20alternative](mailto:charlotte.cook@rnz.co.nz?subject=Covid-19))

[%20Limited%20testing%20kits%20has%20scientists%20searching%20for%20generic%20alternative](mailto:charlotte.cook@rnz.co.nz?subject=Covid-19)

New Zealand is racing to find other ways to produce and source the chemicals and equipment critical to Covid-19 testing.

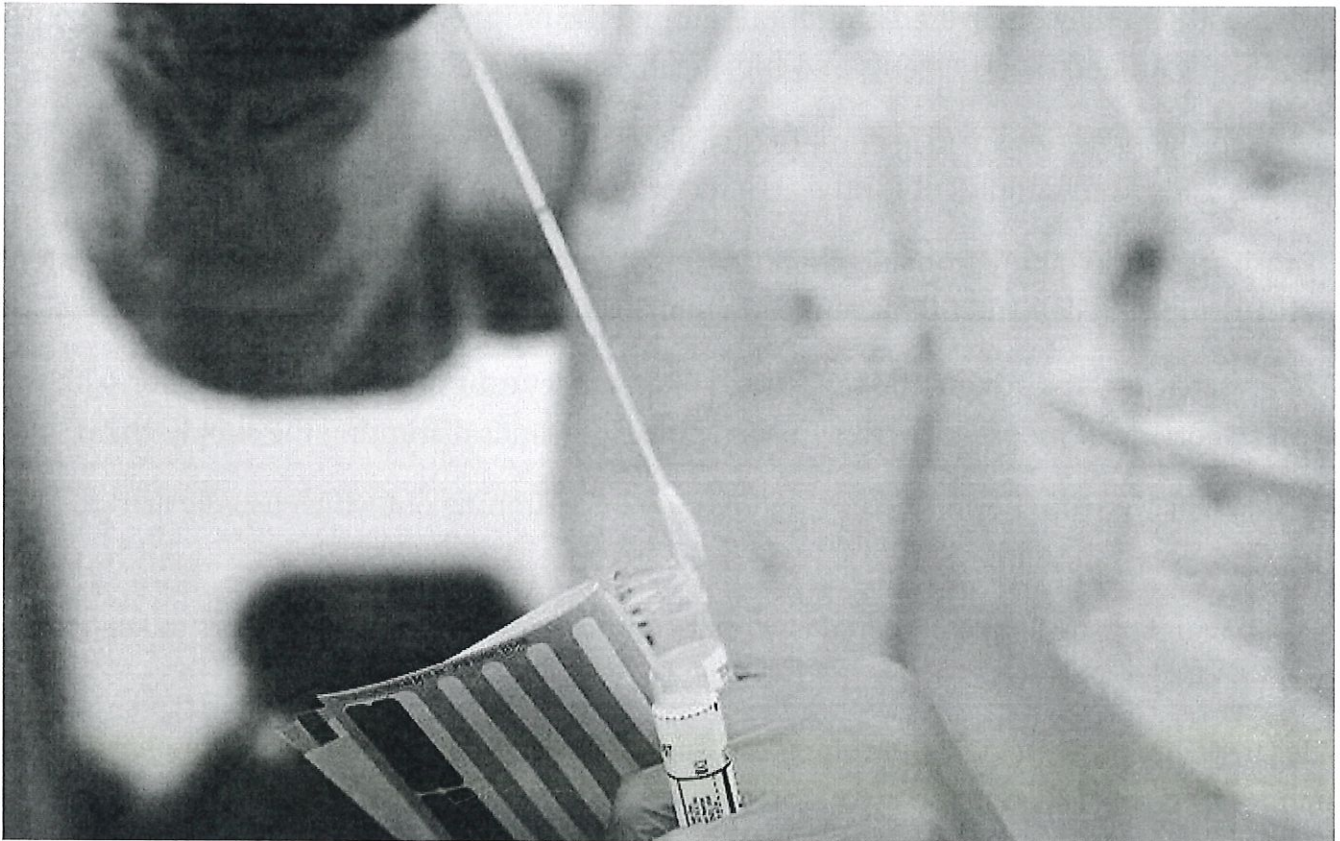


Photo: AFP

Global demand has far surpassed the capabilities of manufacturers for the chemicals needed to process tests.

Microbiologists advising the Ministry of Health said there was a shortage in the global and New Zealand markets and have come up with backup plans.

The Ministry of Health said there were 44,000 testing kits in the country, enough to last 15 days at the current testing rate.

If you have [symptoms \(https://www.rnz.co.nz/news/covid-19/412497/covid-19-symptoms-what-they-are-and-how-they-make-you-feel\)](https://www.rnz.co.nz/news/covid-19/412497/covid-19-symptoms-what-they-are-and-how-they-make-you-feel) of the coronavirus, call the NZ Covid-19 Healthline on 0800 358 5453 (+64 9 358 5453 for international SIMs) or call your GP - don't show up at a medical centre

The kits are made up of reagent chemicals - primers, probes and buffers - in addition to either a nasal or back-of-the-throat swab.

The reagents produce the chemical reaction which tells the lab if a result is positive or negative.

In New Zealand, most laboratories use proprietary - that is, branded - models because they have a higher throughput.

However, they require specific kinds of reagents imported from Europe and the US - without them, they do not work.

Clinical microbiologist **James Ussher** is advising the Ministry of Health's diagnostic working group and said they discovered limitations around the proprietary models a few weeks ago, specifically around their reagents and consumables like cartridges and testing plates.

"Most the laboratories are using proprietary platforms for testing either for the extraction of nucleic acids from samples or for the actual testing platform itself.

"Those are often coming from large multinational companies supplying to many other parts of the world, and demand for reagents far outstrips their ability to supply," Dr Ussher said.

There were concerns around the robustness of manufacturing and supply, Dr Ussher said, with a shortage of proprietary reagents and global demands disrupting the supply chain.

He said labs were often waiting for reagents that were running out which usually arrived in time - or nearly in time.

New Zealand needed to be prepared for other countries and large global players to keep hold of their stock.

"Because things are in global supply, companies are doing the best to try and supply and maintain testing capability in laboratories around the world," Dr Ussher said.

"They're often not able to send out as much as we might like.

"Often those shipments don't get the whole order met so we might be running with less stock on hand than we would feel comfortable with."

The diagnostic working group includes representatives from New Zealand Universities, MBIE and the Ministry of Health.

Together they had been finding ways to source reagents and hardware out of Asia for machines that could take generic supplies.

Dr Ussher said they were looking at getting new hardware so they were not dependent on the more proprietary tests.

"Personally, the laboratory has been working with the university to borrow some equipment from the university that is more generic."

Another clinical microbiologist on the team, Joanne Stanton, was working on another backup plan, looking for people who could make the generic reagents and consumables in New Zealand.

She said they were things the country had not typically produced in the past.

"We are posing that hypothetical question, how much of that testing stream that reagent mix could we supply purely from internal New Zealand sources?

"We're actually looking at 'can we make the little enzymes' and it looks like we can.

"We're going through that process of finding out who those people are, do they have the resources, is all the resources they need in country already? So we're asking those questions."

Dr Stanton said they had identified a number of potential local sources which could produce the critical components needed, but she was still looking for more people who could help.

The Ministry confirmed they were expecting 55,000 more kits from Singapore and 30,000 proprietary reagents due this week.

It had also placed an additional order of 200,000 kits which would be delivered weekly in 25,000 kit drops.

It said proprietary reagents were being delivered weekly.

Dr Ussher said there was always a risk to supplies because of limitations to air freight and shipping.

Read more about the Covid-19 coronavirus:

See all RNZ Covid-19 news (<https://www.rnz.co.nz/news/covid-19>)

A timeline: How the coronavirus started, spread and stalled life in New Zealand (<https://shorthand.radionz.co.nz/coronavirus-timeline/index.html>)

Covid-19 symptoms: What they are and how they make you feel (<https://www.rnz.co.nz/news/national/412497/covid-19-symptoms-what-they-are-and-how-they-make-you-feel>)

Touching your Face: Why do we do it and how to stop (<https://www.rnz.co.nz/national/programmes/first-up/audio/2018738230/touching-your-face-why-do-we-do-it-and-how-to-stop>)

Scientific hand-washing advice to avoid infection (<https://www.rnz.co.nz/news/national/410863/coronavirus-scientific-hand-washing->

advice-to-avoid-infection).

Coronavirus: A glossary of terms

(<https://www.rnz.co.nz/news/national/412427/coronavirus-a-glossary-of-terms>).

The Coronavirus Podcast (<https://www.rnz.co.nz/programmes/the-coronavirus-podcast>).