

Product: ReadyGo™ Sampler

Issue: Obtaining a test sample using conventional assay accessories involves several small steps, each of which carries the potential for user error. The most obvious mistakes are contamination of the swab or buffer solution and not dispensing the correct volume of solution into the sample well.

Reducing the steps required to proficiently collect and dispense the sample improves the likelihood of running an accurate test. It also improves convenience and consequently, the user experience.

Objective: Aid the design, construction, material composition and performance of the ReadyGo™ prototype sampler.

To test the comparative effectiveness of the new ReadyGo™ Sampler against conventional swab and buffer tube method of collecting, preparing and dispensing samples.

Method: Optimise each element of the sampler and compare performance against a well-known, approved covid test.

Our work examined each element of the ReadyGo™ Sampler to improve its usability and performance.

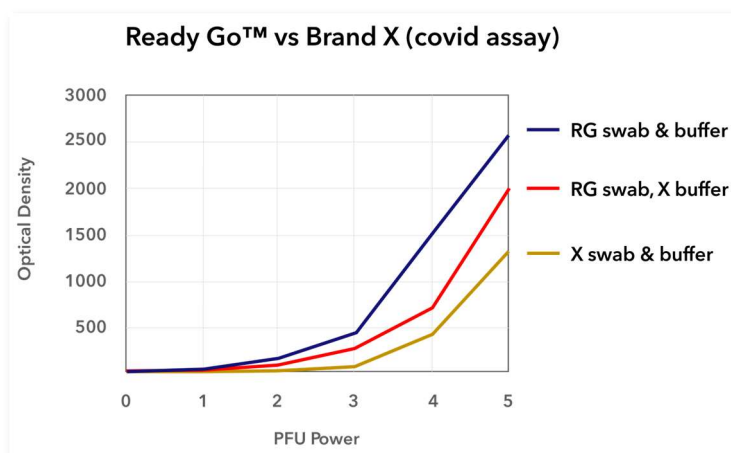
We looked at product design and construction, ensuring that it delivered consistent results.

We identified an issue with the swab material. A surfactant used in its production was interfering with test results and this was rectified by the manufacturer.

The introduction of a chemical treatment to the swab amplified the sample, improving assay performance.

Finally, we experimented with different buffer volumes, making sure that the quantity and viscosity provided the assay with the right amount of buffer at the right release rate.

Results:



The ReadyGo™ Sampler significantly outperformed the Brand X swab, sample vessel and buffer protocol.

At moderate concentrations, the ReadyGo™ protocol produced a positive signal three to four times stronger than Brand X protocol and twice as strong at high concentrations.

Even using Brand X buffer in the ReadyGo™ Sampler, we demonstrated a clear improvement in signal strength.

Applications: Can be adapted to suit a wide range of diagnostic platforms

