



the smart way to measure time & temperature

## WHITE PAPER

# Timestrip® and COVID-19

**Summary:** A number of applications exist for time and temperature monitoring indicators that can be beneficial in the fight against the spread of the COVID-19 virus. Both healthcare professionals and manufacturers of hygiene products can access valuable indicators based on proven chemical technology.

### Background

The outbreak of the coronavirus disease, now known as COVID-19, has had a sudden and significant impact on the lives of citizens of almost all countries. So far (March 2020), around 80 countries have reported cases, and on 11th March, the World Health Organisation (WHO) declared the outbreak a pandemic. Older people, people with pre-existing health conditions and those with compromised immune systems have been found to be especially vulnerable to the disease, and an alarming number have not survived.

### Response

The WHO Strategic Preparedness and Response Plan for COVID-19<sup>(1)</sup> aims to: slow and stop transmission, prevent outbreaks and delay spread; provide optimized care for all patients, especially the seriously ill; and minimize the impact of the epidemic on health systems, social services and economic activity.

Countries such as China seem to have demonstrated the ability to reduce or stop transmission of the COVID-19 virus. In the absence for the time being of an available vaccination or other therapeutic measures, measures to control the outbreak and prevent the rapid spread of this highly infectious condition will rely on public health measures to reduce transmission. These measures include personal protective equipment such as face masks, alcohol-based hand sanitiser, and even soap and water, in addition to general approaches such as social distancing, environmental cleaning and reduced public transport usage.

Healthcare settings such as hospitals and doctors' surgeries can expect a rapid and significant increase in demand as COVID-19 cases present themselves. They must be able to recognise signs and symptoms, identify known complications, and administer treatment while protecting healthcare professionals.

Preventing infection in health workers and avoiding the spread of COVID-19 amongst patients is critical. Timestrip produces a range of reliable, chemical-based indicators that monitor time or temperature, and provide simple alerts when a specified condition is met.

- ▶ Timestrip time indicators have been used to alert healthcare staff when equipment such as hospital curtains are due for replacement. These curtains and other semi-fixtures can carry bacteria and viruses, facilitating their transmission as individuals come into contact with them on a regular basis.
- ▶ Filters for face masks require regular replacement to maintain their efficacy, and time indicators can provide reassurance and alert staff when their supplies need to be changed.

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▶ Hand sanitisers are a familiar feature of healthcare settings these days, but after opening, they have a finite shelf life before replacement is required; Timestrip time indicators can be affixed at the individual product level and activated when opening.

▶ A significant increase is expected in COVID-19 testing. Laboratory procedures involve taking swabs from patients and sending these for testing by nominated laboratories. Special measures must be taken during storage and transport of the specimens, especially with respect to temperature. Guidelines<sup>(2)</sup> from the WHO state that:

**“Specimens which can be delivered promptly to the laboratory can be stored and shipped at 2-8°C. When there is likely to be a delay in specimens reaching the laboratory, the use of viral transport medium is strongly recommended. Specimens may be frozen to -20°C or ideally -70°C and shipped on dry ice if further delays are expected. It is important to avoid repeated freezing and thawing of specimens.”**

Timestrip has available temperature indicators that provide an immediate and irreversible indication of breaches in these specific temperature ranges. As shipment time is also critical in these cases (typically 2 or 5 days according to specimen type), a time indicator can also be deployed.

▶ As demand on their services grows due to COVID-19, hospitals will be determined to ensure that their procedures are as good as possible. The following applications for time and temperature indicators are relevant:

- Blood bag shipment and storage
- Air conditioning and water filter replacement
- Scientific and medical equipment calibration reminders

▶ Individuals are being urged by governments to go into self-isolation or at least to practise social distancing, and to observe more rigorous hygiene procedures. These include the use of alcohol-based hand sanitisers. Manufacturers of these products have available the Timestrip time-based indicators described above, branded as required.

<sup>(1)</sup> COVID-19 Strategic Preparedness and Response Plan - Country preparedness and response status for COVID-19, 16 March 2020

<sup>(2)</sup> Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases. Interim guidance, 2 March 2020

For further guidance on measures to reduce the spread of COVID-19 virus, please see ‘Responding to community spread of COVID-19, Interim guidance’, 7th March 2020, World Health Organisation.