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# In-air pathogen surveillance solution

Fast and highly reliable insight into the safety of indoor air.

**ThermoFisher**  
SCIENTIFIC

# Help protect your people and your community with confidence, while maintaining business and operational continuity.

- Get insight into in-air pathogen presence to monitor and improve safety protocols
- Complement individual screening programs
- Identify risk to help safely re-open and stay open
- Invest in a solution that's easy to use with minimal training

## About Thermo Fisher Scientific

Thermo Fisher Scientific Inc. is the world leader in serving science, with annual revenue exceeding \$30 billion. Our Mission is to enable our customers to make the world healthier, cleaner and safer. Whether our customers are accelerating life sciences research, solving complex analytical challenges, improving patient diagnostics and therapies or increasing productivity in their laboratories, we are here to support them. Our global team of more than 80,000 colleagues delivers an unrivaled combination of innovative technologies, purchasing convenience and pharmaceutical services through our industry-leading brands, including Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific, Unity Lab Services and Patheon. For more information, please visit [www.thermofisher.com](http://www.thermofisher.com).



# The situation

Leaders of organizations large and small, from the national to the local level, are confronted by a vast array of new and urgent questions.

## Critical questions:

- How do we re-open safely?
- How do we know if our SARS-CoV-2 policy is working?
- Are we doing everything we can?
- How can we give our community more confidence?
- Are containment strategies effective?
- Are cleaning procedures appropriate and effective?
- Where are the high-risk areas?

There have been lockdowns and closures, restrictions and recommendations, and ever-changing protocols.

**The outcome: mitigation with mixed results.**

## The need for environmental and occupational surveillance

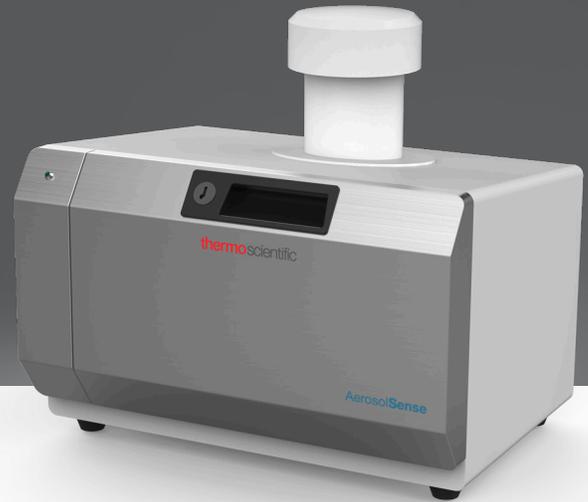
Environmental and occupational surveillance complements the insight you already gain from individual testing, enabling you to **better assess the safety of facilities & communities.**

The path forward begins by identifying pathogens where they're most easily spread—indoor air.

## Understanding in-air pathogen transmission

The world's most contagious diseases are spread by in-air transmission. According to WHO, this is defined as "The dissemination of droplet nuclei that remain infectious when suspended in air over long distances and time."<sup>1</sup> In other words, it's the sneezing, coughing, talking, or breathing from one infected person that releases pathogens into the air to then be inhaled by another person. Examples include influenza, tuberculosis, and coronavirus.

Now it's possible to  
**identify SARS-CoV-2**  
in indoor air.



The air we breathe. The air we share.  
The air that occupies hospitals,  
schools, offices, stores, nursing  
homes, and spaces of all kinds.

This is a critical development. Why?  
Because the decisions you make are  
only as good as the data that informs  
them. And air sampling delivers better  
data about the presence (or absence)  
of pathogens in indoor air—so you can  
make faster, more reliable, and more  
confident decisions.

## Thermo Scientific™ AerosolSense™ Sampler

Our new pathogen surveillance solution delivers timely  
and highly reliable insight into in-air pathogen presence so  
you can monitor and improve your facility safety protocols.

**Highly sensitive and stable aerosol collection and  
separation technology.**



With a small and unintrusive design, the AerosolSense Sampler can be set up in high-traffic areas to collect air samples that may contain in-air pathogens like SARS-CoV-2.

The sampler collects air samples through an omnidirectional inlet. A cartridge installed into the sampler contains the collection substrate. The air sample is directed toward the collection substrate through an accelerating slit impactor. Particles are trapped on the collection substrate as the air is drawn through the sampler. Once samples are collected, they can be sent to a lab, for results within 24 hours.

# Help **protect** your organization, your community and your people in **three simple steps**

01

## COLLECT SAMPLE

Position the sampler on a flat, unobstructed surface and insert sample cartridge.



02

## REMOVE & REPLACE CARTRIDGE

After sampling cycle remove cartridge and place in biohazard bag to send to lab



RESULTS WITHIN  
24 HOURS

03

## SEND CARTRIDGE TO LAB FOR TESTING

Samples are tested using Applied Biosystems™ TaqPath™ COVID-19 Combo Kit, a highly sensitive multiplex diagnostic solution.

- On-site lab: ≤ 2h report availability
- Third-party lab: 2-48h report availability
- Thermo Fisher Scientific testing services: ≤ 24h report availability

# Enable early decision making

The **AerosolSense Sampler** combines capabilities in aerosol capture technology with genetic science to empower leaders to **make more confident decisions**.

- **In-air pathogen surveillance:** Monitor high transmission areas for improved risk assessment.
- **Easy to use design:** Minimal training required for operation.
- **Performance:** Robust system capabilities include aerosol collection and separation technology to deliver consistent performance across diverse environments.
- **Capture other in-air pathogens:** Validated specifically for the SARS-CoV-2 pathogen, the design is intended to capture a wide variety of in-air pathogens.

Enable early decisions for hospitals, nursing homes, offices and other indoor spaces.



## References

1. Infection Prevention and Control of Epidemic- and Pandemic-Prone Acute Respiratory Infections in Health Care. Geneva: World Health Organization; 2014. Glossary. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK214343/>

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