Accurate Coverage of the Most Common Respiratory Pathogens

- Respiratory Syncytial Virus
- Influenza A Virus
- Influenza B Virus
- SARS-CoV-2
- Human Adenovirus
- *Mycoplasma Pneumoniae*

Ordering Information - Assay

Product	Contents	Cat. no.
Logilet Respiratory Pathogen Panel	10 tests/kit	VD1011
Quality Control Kit	PC: 10 tests/kit NC: 10 tests/kit	QC1011
SPECIMEN KITS REQUIRED FOR PRIMARY SAMPLE COLLECTION AND TREATMENT		
Sample Presevation Buffer	10 tests/kit	VP1013-01
	30 tests/kit	VP1013-02
	50 tests/kit	VP1013-03

Reference

1. GBD. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet 396, 1204–1222 (2020).
2. World Health Organization. Global Health Estimates 2016: deaths by cause,age, sex, by country and by region, 2000–2016 (2018). Available from: http://www.who.int/healthinfo/global_burden_disease/estimates/en/index1.html
3. World Health Organization. COVID-19 Cases Dashboard [Internet]. Available from: https://data.who.int/dashboards/covid19/cases?n=c
4. World Health Organization. COVID-19 Deaths Dashboard [Internet]. Available from: https://data.who.int/dashboards/covid19/deaths?n=c
5. World Health Organization. Influenza (Seasonal) [Internet]. Geneva: World Health Organization; Available from: https://www.who.int/news-room/fact-sheets/detail/influenza-(seasonal)
6. Meyer Sauteur Patrick M,Beeton Michael L, European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Study Group for Mycoplasma and Chlamydia Infections (ESGMAC), and the ESGMAC Mycoplasma pneumoniae Surveillance (MAPS) study group,Mycoplasma pneumoniae: delayed re-emergence after COVID-19 pandemic restrictions.[J] .Lancet Microbe, 2024, 5: e100-e101.
7. Centers for Disease Control and Prevention. (n.d.). National Respiratory and Enteric Virus Surveillance System (NREVSS). Available from: https://www.cdc.gov/surveillance/nrevss/index.html
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9. Centers for Disease Control and Prevention. Information for Clinicians on Influenza Virus Testing [Internet]. Available from: https://www.cdc.gov/flu/professionals/diagnosis/index.htm
10. Thomas Prescott, Atkinson,Mitchell F, Balish,Ken B, Waites,Epidemiology, clinical manifestations, pathogenesis and laboratory detection of Mycoplasma pneumoniae infections.[J] .FEMS Microbiol Rev, 2008, 32: 0.

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Logilet Respiratory Pathogen Panel

Delivers laboratory efficiency and rapid comprehensive clinical high quality molecular results for clinicians and patients of respiratory infections.



Logicore System

Flexible Point-of-Care Molecular Diagnostics Platform

LOGiLET

Facing the Issues

Acute respiratory infections (ARIs) are a major worldwide health problem associated with high morbidity and mortality[1]. The World Health Organization (WHO) estimates that ARIs rank as the fourth-highest global cause of mortality,resulting in nearly three million deaths worldwide in 2016 (40 deaths per 100,000)[2].

COVID-19

Global number of cases as of May 12,2024

Coronavirus Cases[3]

700 Million

Deaths[4]

7 Million

Mycoplasma Pneumonia

According to the latest research by ESCMID

The average incidence rate of in Europe, Asia, America and Oceania[6]

4.12%

Influenza

According to the WHO report
Influenza presents seasonal epidemics annual confirmed cases worldwide[5]

Serious cases

3-5 Million

Death from influenza related respiratory diseases

290,000-650,000

Clinical Significance

According to data from the US CDC

The common pathogens of upper respiratory tract infections monitored from 2023 to 2024 are AdV, Flu, RSV, and SARS-COV-2[7].

2020 IDSA-Nucleic acid testing is the gold standard

High sensitivity and specificity of nucleic acid amplification detection can detect one or more viruses, and has become the "gold standard" for clinical virology testing[8].

International Guidelines for Diagnosis and Treatment of Influenza

Outpatient patients, rapid molecular testing is superior to rapid influenza diagnostic testing.
For immunocompromised individuals or those with normal immune function who require clinical pathogen diagnosis, it is recommended to use multiplex PCR to detect the pathogen spectrum[8].

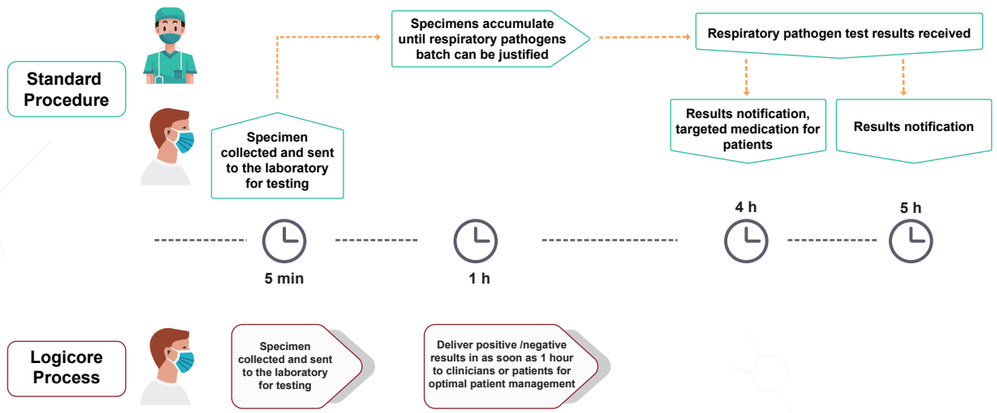
CDC-Both outpatient and inpatient recommendations for influenza molecular testing

It is recommended to use molecular testing instead of rapid antigen testing in outpatient clinics for influenza testing. All suspected influenza hospitalized patients should undergo highly sensitive and specific molecular testing[9].

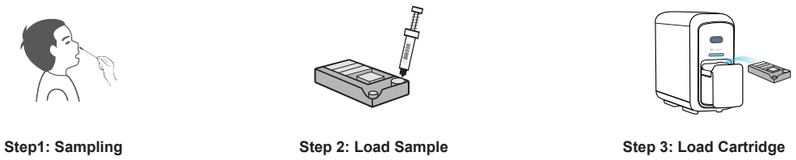
The review of Mycoplasma pneumoniae infections

Due to the difficulty in distinguishing clinical manifestations of respiratory tract caused by Mycoplasma pneumoniae, research on multiple molecular detection techniques is necessary[10].

Traditional Testing VS Logicore System



3 Easy Steps to deliver accurate and rapid results with Logicore System



Step1: Sampling | Step 2: Load Sample | Step 3: Load Cartridge

BioPrime Designer

RSV	RSV A	RSV B					
FluA	IAV(H1N1)	IAV(H1N1) 2009	IAV(H3N2)	IAV(H5N1)	IAV(H7N9)		
FluB	IBV(Victoria)	IBV(Yamagata)					
SARS-CoV-2	Wild-type strain	Beta	Gamma	Delta	Omicron		
HAdV	HAdV-1	HAdV-2	HAdV-3	HAdV-4	HAdV-5	HAdV-7	HAdV-55
MP			/				

Software Designer

Comprehensive Analysis

Precise primer-probe design ensures comprehensive target coverage, enhancing sensitivity and reducing false negatives. Unique probe-target design and optimal cycling conditions enable accurate detection.

Novel Subtype Identification

The system's advanced automation quickly integrates new subtype information into inclusive computational analysis.

Multiplex Interference Judgment

Advanced algorithms predict and mitigate potential interferences among primers and probes, ensuring accurate and reliable detection results.

Reagent Designer

High Specificity, Strong Stability

One-Step RT-PCR with Mixed Enzyme System. Dual-site Taq enzyme antibody prevents non-specific amplification, enhancing efficiency and success rates, even with low-concentration or complex templates.

Anti-Contamination

The dUTP/UDG system incorporated in the reagent, effectively eliminating contamination and ensuring accurate results.

Lyophilization Process

- Extends Shelf Life
- Preserves Bioactivity and Stability
- Rapid Activity Recovery
- Storage and Transport at Room Temperature