

Syndromic Respiratory Panel Qualitative Real-time PCR



Respiratory infections cause a multitude of symptoms with a range of severity in different patient populations. For example, respiratory viruses can lead to runny nose, rales, bronchitis, cough, croup, pharyngitis, tachypnoea, dyspnoea, wheezing, asthma exacerbation, and pneumonia. Severe cases of Respiratory Syncytial Virus and Influenza can be fatal in young or immunocompromised patients, and rare complications like Reye's syndrome may develop. *Bordetella pertussis*, the highly contagious causative agent of whooping cough, has seen a comeback recently, even in vaccinated populations, and *B. parapertussis* diagnosis has increased as well. Antibiotics are available for the treatment of pertussis, as well as *Chlamydia* and *Mycoplasma pneumoniae*. Rapid detection of the most common causative agents of respiratory infection is important for a number of reasons. These include determining the most effective use of isolation procedures, avoiding unnecessary use of toxic antibiotic or antiviral medications, and limiting the length of hospital stays when a non-life-threatening infection or no infection is found. The FDA-approved BioFire FilmArray Upper Respiratory (RP2.1) panel is a qualitative, multiplexed, real-time PCR assay. It is capable of simultaneous detection of multiple pathogens directly from respiratory specimens. The RP2.1 Panel identifies the organisms listed to the right; it differentiates three Influenza A strains when present¹⁻². For more information, call the lab at 513-636-9820.

Reporting Units:

Positive/Negative

Shipping Conditions:

- Ambient if sent within 24 hours
- On cold packs if sent >24 hours after collection

Testing Schedule:

Syndromic respiratory panel testing is performed in batches Mon - Sat on first and second shift and on first shift on Sun. For urgent requests, call the lab at 513-636-9820. **TAT:** <24-36 hours

Organisms Detected:

Viruses:

Adenovirus
Coronavirus (HKU-1, NL63, 229E, OC43, SARS-CoV-2)
Metapneumovirus
Rhinovirus/Enterovirus
Influenza A virus (H1, H1-2009, H3)
Influenza B virus
Parainfluenza viruses 1, 2, 3, 4
Respiratory Syncytial Virus

Bacteria:

Bordetella pertussis
Bordetella parapertussis
Chlamydia pneumoniae
Mycoplasma pneumoniae

CPT Code:

See component codes.

Clinical Lab Index:

<https://www.testmenu.com/cincinnatichildrens/tests/943010>

Contact Information:

Cincinnati Children's Division of Pathology
Molecular and Genomic Pathology Services (MGPS)
Phone: 513-636-9820
Fax: 513-517-7099
Email: pathology@cchmc.org
Website: cincinnatichildrens.org/pathology
For pricing or billing questions, call 513-636-4261.

Shipping Address:

Cincinnati Children's Hospital Medical Center
Attn: Molecular and Genomic Pathology Services (MGPS)
240 Albert Sabin Way, R2.001
Cincinnati, OH 45229

References:

1. FilmArray® Respiratory Panel 2.1 (RP2.1) Panel Instruction Booklet. BFR0000-8303-01. BioFire Diagnostics, LLC. May 2020.
2. Versalovic J, Carroll K, Funke G, et al, eds. Manual of Clinical Microbiology. 10th ed. American Society of Microbiology Press, Washington D.C. 2011.

Sample Type	Volume Needed	Collection Container
Aspirate: endotracheal tube, tracheal	1mL	Sterile Container
Bronchoalveolar Lavage (BAL) fluid	1mL	Sterile Container
Swab*: nasal, nasopharyngeal	n/a	Red or Green Culturette Swab

*Red or green top culturette swabs preferred; viral transport media acceptable.