Savanna

Not just simple. Simply remarkable.

True Sample to Result Multiplex RT-PCR in less than 25 minutes.

Instrumentation and Assays





Many real-time polymerase chain reaction (RT-PCR) testing technologies require high capital costs, labor-intensive workflow procedures and highly-specialized staffing. They also limit access to near-patient testing and have prolonged turnaround times. All of these factors significantly limit the efficiency of your molecular testing routine.

Savanna: a true sample-to-result point-of-care multiplex molecular solution overcomes many of these challenges by leveraging several state-of-the-art features:

- No sample preparation required, for optimized POC-testing
- A system that accepts both liquid samples and direct dry swabs*
- Magnetic bead-based nucleic acid extraction and amplification
- Dual-sided Peltier thermocycler elements that enable 40 rapid qPCR cycles
- Fast data readouts that utilize up to 4 fluorescent reporter colors
- Delivery of qualitative and semi-quantitative results

Rapid answers when and where it matters:

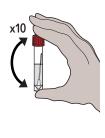
Savanna provides actionable PCR results -

in less than 25 minutes Sample-to-Result time!

Loading a Patient Sample

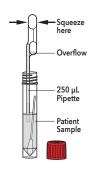
1

Invert the sample contained in transport media 10 times to thoroughly mix the sample.



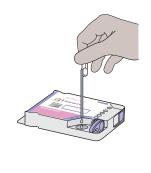
2

Extract liquid sample from the transport tube using the transfer pipette.



3

Empty the contents of the pipette into the sample port.



4

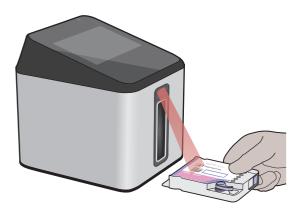
Close the sample port and **load** the test cartridge into Savanna.



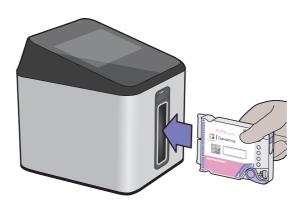
... Results out



Scan the barcode located on the test cartridge.



2 Insert the cartridge into the instrument. Testing begins automatically.



3 Review

Test results are available after an approximately 20-minute run time



Sample Interpretation

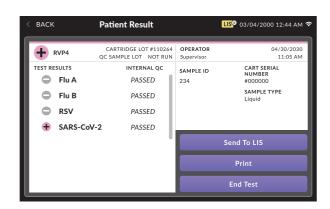


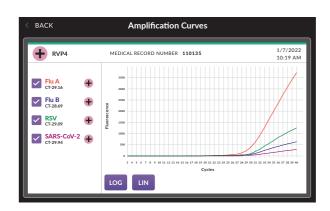
Positive Result



Negative Result

Various Displays of Results on Easy to Read Touch-Screen





One Panel for 4 Respiratory Pathogens

RVP4: A Panel of 4 Respiratory Virus Analytes

Are you uncertain which virus it could be? Accurately and simultaneously test for SARS-CoV-2, Flu A, Flu B, and RSV - on a panel that only takes 20 minutes to run! In addition to speed, RVP4 provides excellent clinical performance and the ability to detect SARS-CoV-2 variants.

Clinical Performance

Savanna RVP4 Performance Compared to BioFire® Respiratory Panel 2.1 (RP2.1) with All Specimens								
Virus	True Positive	False Positive	True Negative	False Negative	Positive Percent Agreement	Negative Percent Agreement		
All Specimens								
Influenza A	5	0	219	0	100% (5/5) 95% CI = 56.6% - 100%	100% (219/219) 95% CI = 98.3% - 100%		
Influenza B	7	0	217	0	100% (7/7) 95% CI = 64.6% - 100%	100% (217/217) 95% CI = 98.3% - 100%		
RSV	22	0	202	0	100% (22/22) 95% CI = 85.1% - 100%	100% (202/202) 95% CI = 98.1% - 100%		
SARS- CoV-2	143	0	80	1	99.3% (143/144) 95% CI = 96.2% - 99.9%	100% (80/80) 95% CI = 95.4% - 100%		

See Package Insert for complete information

Sequence Homology for SARS-CoV-2*

Database	Common Name	Variant / Strain	pp1ab Sequences with Amplicon	
	Common Name	variant/Strain	N	% of all Sequences
GISAID+ NCBI	Alpha	B.1.1.7+Q.x	1,085,729	98.9%
	Beta	B.1.351 + B.1.351.x	35,206	98.5%
	Gamma	P.1 + P.1.x	85,101	98.8%
	Delta	B.1.617.2 + AY.x	1,124,340	99.5%
	Lambda	C.37	6,428	99.2%
	Mu	B.1.621	5,726	96.6%
	Omicron	B.1.1.529+BA.x **	8,852	99.5%

^{*}In Silico Analysis suggests Savanna RVP4 Assay performance is not affected by the corresponding variants of SARS-CoV-2

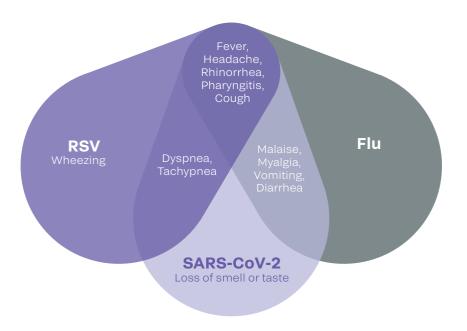
^{**} Omicron BQ 1.1 and XBB1.5 are detected

Different Panels for a Variety of Pathogens

Syndromic Testing with Savanna

A syndrome is a set of signs and symptoms that occur together but can have different causes. In the case of infectious diseases, syndromic testing is defined as detecting different pathogens with overlapping signs and symptoms with just one test.

The Savanna RVP4 and subsequent panels aim to detect meaningful groups of pathogens causing a particular syndrome with just one test.



Syndrome in Diseases with 3 Relevant Respiratory Viruses

Faster simultaneous diagnostic results for multiple pathogens can yield several clinically-relevant advantages. Studies have shown that the rapid identification of the causative agent of acute respiratory infections can lead to a reduction in antibiotic therapy, improved infection control, optimized use of neuraminidase inhibitors and reduced hospital stays [1,2,3,4].

For Expanded Respiratory Testing

Savanna RVP11 Assay* - A Panel of Eleven Respiratory Virus Analytes:

SARS-CoV-2
Flu A
Flu B
Flu B
RSV

Adenovirus
Enterovirus
HMPV
Parainfluenza 1,3
Parainfluenza 2,4

Further Panels in Development:

HSV/VZV/ Syphilis GI Panel (bacterial, viral, parasites)

Vaginitis/ Vaginosis Panel

STI Panel

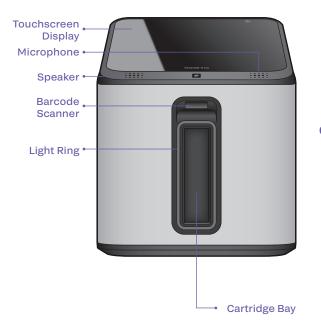
Pharyngitis Panel

^{*}Future availability

Savanna in Detail



Front



Compact Footprint (21 x 25 x 25 cm) <12 kg

Rear Power Switch Savanna Expansion **Power Port** Connection Ports (3)

→ Ethernet Port



Future expansion possibilities of up to 3 auxillary bays, controlled by the central unit*

Savanna Instrument

Catalog #20382

USB Port •

Savanna RVP4 Assay

12 Test Kit: Catalog #20412

*Future availability

- 1. Brendish N, et al. Clinical impact of molecular point-of-care testing for suspected COVID-19 in hospital (COV-19POC): a prospective, interventional, non-randomised, controlled study. Lancet Respir Med. 2020; 8 (12); 1192-1200
- 2. Rappo U, Schuetz A, Jenkins S, Calfee D, Walsh T, Wells M, Hollenberg J, Glesby M. Impact of Early Detection of Respiratory Viruses by Multiplex PCR on Clinical Outcomes in Adult Patients. American Society for Microbiology Journal of Clinical Microbiology 2016; 54 (8), 2096-2103
- 3. Rogers BB et al. Impact of a rapid respiratory panel test on patient outcomes. Arch Pathol Lab Med. 2015; 139:636-641
- 4. Echavarría M, et al., Clinical impact of rapid molecular detection of respiratory pathogens in patients with acute respiratory infection. Journal of Clinical Virology 2018; 108: 90-95



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