

# CentriDx™ Automated Nucleic Acid Detection Analyzer

CentriDx™ Automated Nucleic Acid Detection Analyzer, designed and developed by Bioer Technology, leverages leading microfluidic chip technology combined with unique centrifugal rotation (including acceleration, deceleration, and positioning) to drive precise liquid flow and mixing. CentriDx™ enables seamless nucleic acid extraction, amplification, and detection processes within the microfluidic chip, streamlining experiments for enhanced simplicity, speed, and accuracy. With its compact, user-friendly design, CentriDx™ requires no setup or calibration procedures – simply plug and play. The intuitive software interface further simplifies operation, eliminating the need for complex experimental configurations.

## Features

### Fully Automated

Without the need for additional handling, the integrated microfluidic cartridge enables automated nucleic acid extraction and amplification detection by liquid flow.

### Simple Workflow

The reagents are pre-embedded, with minimal hands-on time, just to add samples in, then results out.

### Expandable Modules

Modular design for flexibility.

### Multiplex Detection

Featuring a 4 - 6 fluorescence channel design, this system supports the simultaneous detection of up to 48 targets and offers customizable panels.

### All- in-One Cartridge

Totally enclosed microfluidic chip to reduce the risk of contamination.

### Fast, Easy and Efficient

Sample in, result out within 60 minutes.



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- Accurate
- Ultra-multiplex
- Qualitative
- CE-IVDR Certified



# CentriDx™ Automated Nucleic Acid Detection Analyzer

## Microfluidic Chip



### Microfluidic Chip Technology:

1. Monolithic integrated chip without moving parts.
2. Pre-embedded reagent, sample-to-answer detection.
3. Fully closed chip to avoid cross contamination.
4. Well-proven magnetic bead nucleic acid extraction and qPCR analysis workflow.
5. Storage at atmospheric pressure under room temperature.
6. Centrifugo-pneumatic eluate aliquoting with CV≤3% for multiplexing.

1

Scan microfluidic chip

2

Load sample

3

Run protocol

4

Result out within 60 min

| Product Name                         | CentriDx™ Automated Nucleic Acid Detection Analyzer |
|--------------------------------------|-----------------------------------------------------|
| Product Model                        | CentriDx 200                                        |
| Touch Screen                         | 8 inch                                              |
| Sample Throughput                    | 2, Expandable to 4, 6, 8 throughput                 |
| Fluorescence Channels                | 4, 5, 6                                             |
| Multiplex                            | Up to 48 targets                                    |
| Fluid Drive                          | Centrifugal rotation                                |
| Turnaround Time                      | ≤ 60 minutes                                        |
| Fluorescence Detection Repeatability | CV ≤ 2%                                             |
| Max Ramp Rate                        | ≥ 8 °C/s                                            |
| Precision and Accuracy               | 0.2 °C                                              |
| Power Supply                         | 100-240 V, 50/60 Hz, 500W                           |
| Dimensions                           | 300 (L)x410 (W)x350(H) mm                           |
| Weight                               | 18 kg                                               |
| Certificate                          | CE-IVDR                                             |

## CentriDx 200 Test Panels (Microfluidic Chip)

### Sample in, result out in just one hour

### BSJ54 CentriDx™ Respiratory Pathogen Panel I (RUO)

#### — 7 viral and bacterial pathogens

Sample Type: oropharyngeal swab, nasopharyngeal swab

- Novel coronavirus
- Influenza A Virus
- Adenovirus

- Influenza B virus
- *Mycoplasma pneumoniae*

- Respiratory syncytial virus subtype A
- Respiratory syncytial virus subtype B

### BSJ56 CentriDx™ Respiratory Pathogen Panel II (RUO)

#### — 17 viral and bacterial pathogens

Sample Type: oropharyngeal swab, nasopharyngeal swab

- Novel coronavirus
- Adenovirus
- *Chlamydia pneumoniae*
- Bocavirus
- Rhinovirus
- *Haemophilus influenzae*

- Influenza A
- Influenza B
- *Mycoplasma pneumoniae*
- Human metapneumovirus
- Enterovirus
- *Streptococcus pneumoniae*

- Respiratory syncytial virus subtype A
- Respiratory syncytial virus subtype B
- Parainfluenza virus type I
- Parainfluenza virus type II
- Parainfluenza virus type III

### BSJ62 CentriDx™ Lower Respiratory Pathogen Panel I (RUO)

#### — 19 viral and bacterial pathogens

Sample Type: sputum, broncho alveolar lavage fluid (BALF)

- *Cryptococcus* spp.
- *Cryptococcus neoformans*
- *Cryptococcus gattii*
- *Aspergillus* spp.
- *Pneumocystis* spp.
- *Pneumocystis jirovecii*
- *Haemophilus influenzae*

- *Bordetella pertussis*
- *Bordetella parapertussis*
- *Moraxella catarrhalis*
- Group A streptococcus
- *Klebsiella pneumoniae*
- *Legionella* spp

- *Chlamydophila psittaci*
- *Chlamydia pneumoniae*
- *Legionella pneumophila*
- *Neisseria meningitidis*
- *Mycoplasma pneumoniae*
- *Streptococcus pneumoniae*

### BSJ58 CentriDx™ Respiratory Pathogen Panel III (RUO)

#### — 25 viral and bacterial pathogens

Sample Type: oropharyngeal swab, nasopharyngeal swab

- Novel coronavirus
- Influenza A
- Influenza A/H1
- Influenza A H1N1 pdm09
- Influenza B
- *Bordetella pertussis*
- Bocavirus
- Enterovirus
- Rhinovirus

- Adenovirus
- *Mycoplasma pneumoniae*
- *Chlamydia pneumoniae*
- Coronavirus 229E
- Coronavirus OC43
- Coronavirus NL63
- Coronavirus HKU1
- *Streptococcus pneumoniae*

- Respiratory syncytial virus subtype A
- Respiratory syncytial virus subtype B
- Human metapneumovirus
- Parainfluenza virus type I
- Parainfluenza virus type II
- Parainfluenza virus type III
- Parainfluenza virus type IV
- *Haemophilus influenzae*

### BSJ69 CentriDx™ Sexually Transmitted Disease Panel I (CE-IVD)

#### — 13 viral and bacterial pathogens

Sample Type: male urethral swab, female cervical swab

- *Chlamydia trachomatis* (CT)
- *Treponema pallidum* (TP)
- *Gardnerella vaginalis* (GV)
- *Mycoplasma hominis* (MH)
- *Candida albicans* (CA)

- *Neisseria gonorrhoeae* (NG)
- *Trichomonas vaginalis* (TV)
- *Haemophilus ducreyi* (HD)
- *Ureaplasma parvum* (UP)

- *Ureaplasma urealyticum* (UU)
- Herpes simplex virus type 1 (HSV-1)
- Herpes simplex virus type 2 (HSV-2)
- *Mycoplasma genitalium* (MG)

### BSJ68 CentriDx™ Gastrointestinal Pathogen Panel I (RUO)

#### — 11 viral pathogens

Sample Type: feces, anal swab

- Norovirus GI
- Norovirus GII
- Astrovirus
- Enteric adenovirus

- Sapovirus I
- Sapovirus II
- Sapovirus IV
- Sapovirus V

- Group A rotavirus
- Group B rotavirus
- Group C rotavirus

### BSJ63 CentriDx™ Gastrointestinal Bacteria Panel I (RUO)

#### — 23 bacterial pathogens

Sample Type: feces, anal swab

- *Vibrio parahaemolyticus*
- *Vibrio cholerae*
- *Vibrio fluvialis*
- *Vibrio vulnificus*
- *Vibrio alginolyticus*
- *Cronobacter sakazakii*
- *Bacillus cereus*
- *Aeromonas hydrophila*

- *Campylobacter fetus*
- *Campylobacter jejuni*
- *Campylobacter coli*
- *Salmonella* spp.
- *Shigella* spp.
- *Plesiomonas shigelloides*
- *Listeria monocytogenes*
- *Clostridioides difficile*

- *Escherichia coli* O157:H7
- Enteropathogenic *escherichia coli*
- Enterotoxigenic *escherichia coli*
- Enterohemorrhagic *escherichia coli*
- Enteroinvasive *escherichia coli*
- Enteraggregative *escherichia coli*
- *Yersinia enterocolitica*

### BSJ 81 CentriDx™ Gastrointestinal Bacteria Panel II (RUO)

#### — 19 bacterial pathogens

Sample Type: feces, anal swab

- *Diarrheagenic Escherichia coli*
- *Escherichia coli* O157:H7
- *Salmonella*
- *Campylobacter jejuni*
- *Campylobacter coli*
- *Campylobacter fetus*
- *Shigella*

- *Plesiomonas shigelloides*
- *Cronobacter sakazakii*
- *Listeria monocytogenes*
- *Yersinia enterocolitica*
- *Vibrio parahaemolyticus*
- *Vibrio cholerae*
- *Vibrio alginolyticus*

- *Aeromonas hydrophila*
- *Clostridioides difficile*
- *Bacillus cereus*
- *Vibrio fluvialis*
- *Vibrio vulnificus*

\*The target combinations in the CentriDx detection reagent panel may be adjusted. Final specifications are subject to the official product release.