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Bioneer

Healthier Future for
Humanity with
Genomic Technology

BIONEER MDx Systems

ExiStation™ Series

FEATURES OF *ExiStation*™ SYSTEM

ExiStation™

- Able to handle 1 to 48 samples with combination of up to 3 *ExiPrep*™ 16 Dx and 1 *Exicycler*™ 96
- Available simultaneous diagnosis of various diseases, for example HIV, STI and TB since each *ExiPrep*™ 16 Dx can be extract nucleic acid from different specimen at the same time

ExiStation™ 48 / *ExiStation*™ 48 A

- Advantage when test some diseases using same type of specimen
- Nucleic acid extraction from 48 samples within an hour
- Use primary tube directly : all automation such as decapping/capping of sample tube and sample transfer*
- Input sample information automatically by using built-in barcoding system*

* Only apply to *ExiStation*™ 48 A

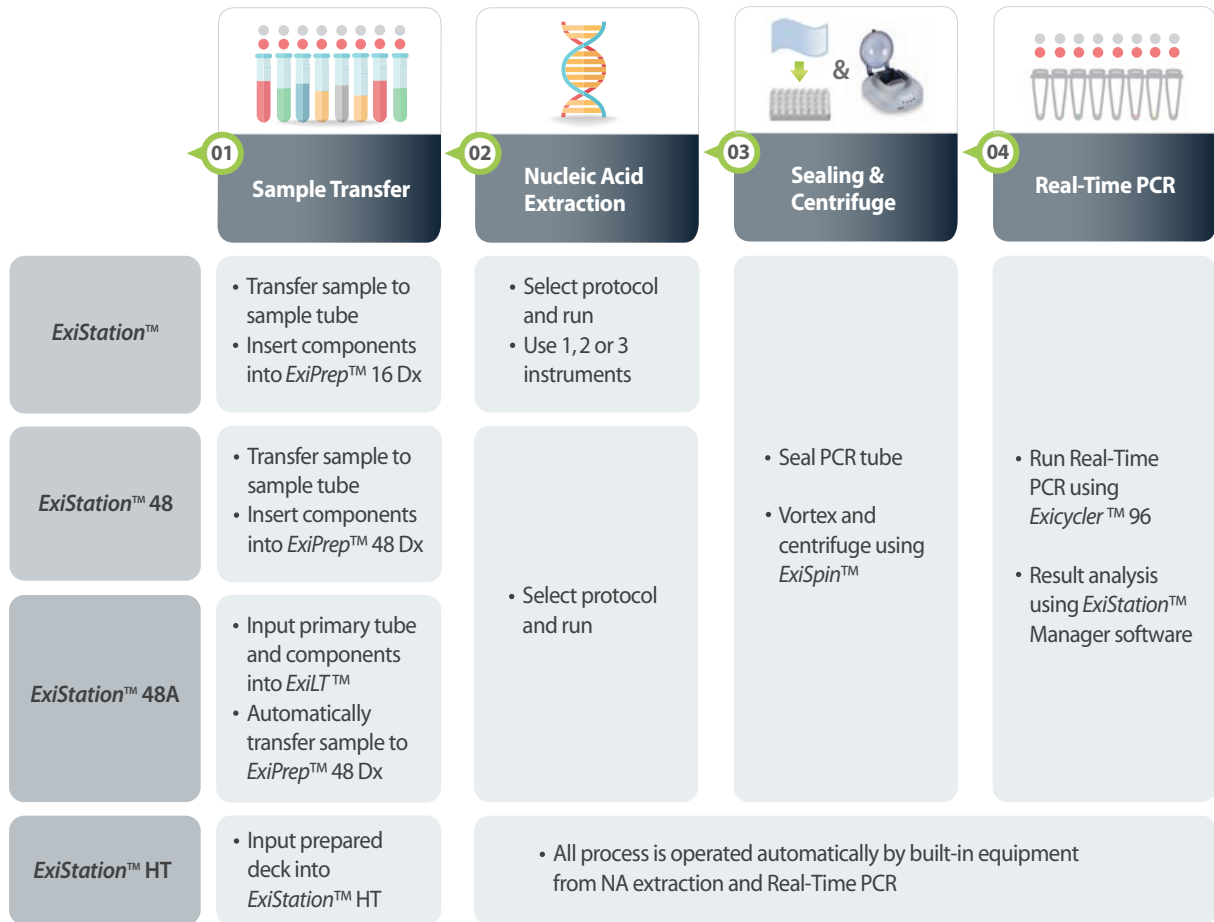
ExiStation™ HT

- Full automatic function allows real high through-put by working over-night
- Minimized handling step by “Sample-in, Data out” operation
- Up to 5 different types of specimen can be used in a single loading

CONFIGURATIONS

	<i>ExiStation</i> ™	<i>ExiStation</i> ™ 48 <small>In Development</small>	<i>ExiStation</i> ™ 48 A <small>In Development</small>	<i>ExiStation</i> ™ HT
Instruments	<ul style="list-style-type: none"> • <i>ExiPrep</i>™ 16 Dx (3) • <i>Exicycler</i>™ 96 (1) • <i>ExiSpin</i>™ (1) • Notebook PC (1) 	<ul style="list-style-type: none"> • <i>ExiPrep</i>™ 48 Dx (1) • <i>Exicycler</i>™ 96 (1) • <i>ExiSpin</i>™ (2) 	<ul style="list-style-type: none"> • <i>ExiLT</i>™ (1) • <i>ExiPrep</i>™ 48 Dx(1) • <i>Exicycler</i>™ 96(1) • <i>ExiSpin</i>™ (2) 	<ul style="list-style-type: none"> • Integrated stand alone MDx platform
Nucleic Acid Extraction Kit	<ul style="list-style-type: none"> • <i>ExiPrep</i>™ Dx Kits 	<ul style="list-style-type: none"> • <i>ExiPrep</i>™ 48Dx Kits 		<ul style="list-style-type: none"> • <i>ExiPrep</i>™ HT Kits
Real-Time PCR Kit	<ul style="list-style-type: none"> • <i>AccuPower</i>® Real-Time PCR Kits 			<ul style="list-style-type: none"> • <i>AccuPower</i>® HT Kits

WORKFLOW



THROUGH-PUT

Configuration	Max. No. of test / a day (based on 8-hour workday)	Hands on time (for Extraction)	Extraction	Hands on time (for PCR)	PCR Analysis
<i>ExiStation™</i> (with 1 <i>Exiprep™</i> 16 Dx)	48 tests	15 min	1hr 30 min	15 min	1hr 20min
<i>ExiStation™</i> (with 2 <i>Exiprep™</i> 16 Dx)	96 tests	30 min	1hr 30 min	15 min	1hr 20min
<i>ExiStation™</i> (with 3 <i>Exiprep™</i> 16 Dx)	144 tests	45 min	1hr 30 min	15 min	1hr 20min
<i>ExiStation™</i> 48	144 tests	35 min	1hr	15 min	1hr 20min
<i>ExiStation™</i> 48A	192 tests	5 min	1hr 20 min	15 min	1hr 20min
<i>ExiStation™</i> HT	480 tests	1hr	First 96 samples (1 Deck) : 3 hours Subsequent samples in 96 batch : 1.5 hours		

EQUIPMENT OF EACH SYSTEM

ExiPrep™ 16 Dx

- Simultaneous nucleic acid extraction from various types of clinical samples
(Each of 3 ExiPrep™ 16 Dx extracts different targets at once)
- Handle Max 48 samples in 90 min
(Each ExiPrep™ 16 Dx handles 16 samples in 90min)



ExiPrep™ 48 Dx

- Enhanced usability with built in automatic cartridge puncher
- Various option of sample volume : 100, 400 and 800 ul
- Able to using primary tube by docking ExiLT
- Handle Max 48 samples in an hour



Exicycler™ 96

- Superior sensitive optics by light polarization which remove a reflection light, allowing precise quantification and target discrimination
- Improved thermal block ramping rate
(Normal block (Max 4.5°C/sec), Fast block (Max 5.0°C/sec))
- Max. 96 samples in 90min



ExiSpin™

- Fully automated spin-mix-spin centrifuge
- Programmable protocol ensures reproducible results
- ExiStation™ system includes 1 ExiSpin™
ExiStation™ 48 system includes 2 ExiSpin™



ExiStation™ Manager software

- Control the entire ExiStation™ System from sample preparation to data analysis
- Automatic analysis of different target results for individual samples with LIS connection

ULTRA SENSITIVE ANALYTICAL PLATFORM for MDx

BIONEER's *ExiStation™*, Universal Molecular Diagnostic System, is a fully integrated proprietary platform that combines unique strengths of high quality sample preparation and PCR reagents with automated analysis, making it an ultra sensitive molecular diagnostics platform unmatched by any others.

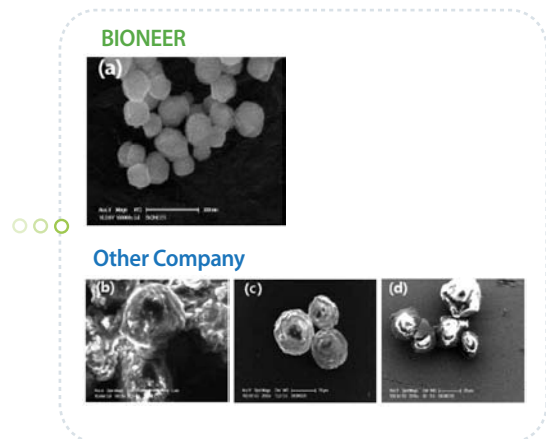
CHARACTERISTICS

ExiStation™ System

- Comprised of *ExiPrep™*16 / 48 Dx for automated sample preparation, one *Exicycler™* 96 for detection
- Able to detect low copies of viruses in samples owing to built-in quality control system
- Apply same thermal cycle condition for all *AccuPower®* kit optimized to *Exicycler™* 96
- Easier diagnosis with pre-installed protocol and Automated results analysis by *ExiStation™* software

ExiPrep™ Dx Kits

- High-purity nucleic acid extraction from any clinical specimens such as whole blood, serum, plasma, CSF, saliva, swab & cell free body fluid and etc.
- Optimized for Protocol-Driven automated nucleic acid extraction using *ExiPrep™* instruments
- Magnetic Silica Nanobead-based purification
- DNase- & RNase-free elution buffer system



Accupower® Real-Time PCR Kits

- *In vitro* Quantitative/Qualitative diagnostic kits for various diseases
Automation Instrument: Optimized for *Exicycler™* 96
- Various patented technologies are applied
 - *AccuPower®* : All components necessary for real-time PCR are contained within one tube increases the stability of reagents and simplified reaction setup
 - HotStart (for DNA): eliminates non-specific DNA amplification the most sensitive PCR assays available
 - *Dual-HotStart™* (for RNA): eliminates non-specific cDNA synthesis and non-specific DNA amplification the most sensitive one-step RT-qPCR assays available

APPLICATIONS

Mosquito-borne Diseases

- Zika virus (ZIKV)
- Dengue virus (DENV)
- Chikungunya virus (CHIKV)

AIDS

- Human Immunodeficiency virus (HIV)

Hepatitis

- Hepatitis B virus (HBV)
- Hepatitis C virus (HCV)

Sexually transmitted infections

- STI8A (CT/NG/UU/MG)
- STI8B (TV/MH/HSV-1/-2)
- STD2A (CT/NG)
- Chlamydia tracomatis (CT)
- Neisseria gonorrhoeae (NG)
- Ureaplasma urealyticum (UU)
- Mycoplasma genitalium (MG)
- Trichomonas vaginalis (TV)
- Mycoplasma hominis (MH)
- Herpes simplex virus type 1/ type2 (HSV-1/ -2)
- Candida albicans (CA) & Gardnerella vaginlais(GV)
- Human herpes virus 6 / 8 (HHV6 / HHV8)
- Toxoplasma gondii (TG)

Tuberculosis

- MTB & NTM
- Mycobacterium tuberculosis (MTB)
- Non-tuberculous Mycobacteria (NTM)
- Multidrug-resistant tuberculosis (MDR-TB)

Respiratory pathogen

- Influenza A (InfA)
- New Influenza A (New InfA)
- Middle East Respiratory Syndrome (MERS)
- Ebola virus (EBOV)

Pneumonia pathogens

- Chlamydia pneumomiae (CP)
- Mycoplasma pneumomiae (MP)

Transplantation related virus

- Human Cytomegalovirus (CMV)
- Epstein-Barr virus (EBV)
- BK virus (BKV)

Gastrointestinal Pathogens

- Norovirus (NOR)
- Enterovirus (EV / EV71)

Human Papillomavirus

- Human papillomavirus 16/18 (HPV16/18)
- HPV genotyping

Human Genotyping

- JAK2 V617F
- CYP2C19
- MTHFR
- Factor V Leiden
- ApoE
- HLA-B27
- TPMT
- Warfarin

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