ExiPrep[™]16 Plus

Fully Automated Nucleic Acid Extraction System





Bioneer Corporation is Korea's leading biotech company. Bioneer is the first Korean biotechnology company when it was established in 1992.

Why *ExiPrep*[™]16 Plus?

- ✓ Walk-away automation
- ✓ Extract up to maximum of 16 samples simultaneously
- ✓ Purify DNA/RNA samples in 60 minutes
- ✓ Increased productivity, reproducibility, and reliability



Convenient Touchscreen

The 3.5" touchscreen offers an intuitive interface for operation such as selecting protocols and controlling the UV sterilization lamp

Pre-programmed Protocols

The pre-programmed protocols are optimized for the target nucleic acid and clinical samples. There are up to 990 unique protocols, allowing to set up optimal extraction conditions and outstanding reproducibility.

Automatic UV-lamp Sterilization

The UV sterilization lamp can be set to sterilize the instrument chamber before and after the extraction, eliminating inter-assay cross-contamination.

Proprietary Silica Magnetic Beads

The silica magnetic beads in our extraction kits were specially designed to maximize DNA/RNA binding efficiency, maximizing the recovery efficiency.

Built-in Contamination Shield

Sits beneath the pipette tips when the *ExiPrep*™16 Plus is moving across the plate, eliminating the possibility of intraassay cross-contamination.

Built-in Heating & Magnetic Block

The *ExiPrep*[™]16 Plus includes dual-purpose heating/magnetic blocks. While heating increases sample lysis efficiency, maximizing extraction yield and purity, the magnetic block allows the beads to bind with greater affinity without well-to-well movement, increasing bead concentration and binding surface area to maximize nucleic acid recovery.

Workflow



I Experimental Data

Genomic DNA from cultured mammalian cell (HeLa)

·Sample volume: 1X10⁶ cells

- ·Protocol number: 109
- •Total prep time: about 1 hr 30 min
- ·Average yield: 4-8 µg



Figure 1. Lanes 1, 3, 5, 7, 9, 11, 13, 15 were extracted with 1×10^6 cells of cultured HeLa cell and lanes 2, 4, 6, 8, 10, 12, 14, 16 were extracted with ddH₂O as a negative control in DNA extraction. Note that all the samples have similar yields. Purity was also tested and was consistently between 1.8 and 2.0 (not shown).

Genomic DNA from tissue (bovine skeletal muscle)

- ·Sample volume: ~ 25 mg
- ·Protocol number: 102
- ·Total prep time: about 1 hr 30 min
- $\cdot \text{Average yield:}$ up to 20 μg



Figure 3. Lanes 1, 3, 5, 7, 9, 11, 13, 15 were extracted with 25 mg of bovine tissues and lanes 2, 4, 6, 8, 10, 12, 14, 16 were extracted with dH_2O as a negative control in DNA extraction. Note that all the samples have similar yields. Purity was also tested and was consistently between 1.9 and 2.0 (not shown).

Genomic DNA from bacteria (E.coli)

- •Sample volume: 1X10⁹ cells •Protocol number: 109
- •Total prep time: about 1 hr 40 min
- ·Average yield: 8-12 µg



Figure 2. Lanes 1, 3, 5, 7, 9, 11, 13, 15 were extracted with $1\times10^{\circ}$ cells of *E.coli* cells and lanes 2, 4, 6, 8, 10, 12, 14, 16 were extracted with ddH_2O as a negative control in DNA extraction. Note that all the samples have similar yields. Purity was also tested and was consistently between 1.9 and 2.0 (not shown).

Genomic DNA from plant tissue (spinach leaf)

- ·Sample volume: ~ 100 mg
- ·Protocol number: 104
- ·Total prep time: about 1 hr
- •Average yield: up to 5 µg



Figure 4. Lanes 1, 3, 5, 7, 9, 11, 13, 15 were extracted with 100 mg of spinach leaves and lanes 2, 4, 6, 8, 10, 12, 14, 16 were extracted with ddH_2O as a negative control in DNA extraction. Note that all the samples have similar yields. Purity was also tested and was consistently between 1.9 and 2.0 (not shown).

Easy-to-Use, Easy-to install: Automated DNA/RNA Extraction



RNA extraction using *ExiPrep*[™] Plus Plant Total RNA Kit





Chinese cabbage (leaf) Broccoli (leaf)



Chinese cabbage (seed)



Red bean (seed)

Figure 1. Results from analyzing total RNA extracted from various plant samples

Results of agarose gel electrophoresis of total RNA extracted from various plant samples are shown above. Each subunit of rRNA can be clearly seen, implying the intact extraction of RNA during the extraction process without any degradation.

RNA extraction using ExiPrep[™] Plus Viral DNA/RNA Kit



Figure 2. Viral DNA Extraction using $\mathit{ExiPrep} \,{}^{\mathrm{\tiny M}}$ Plus Viral DNA/RNA Kit from HBV serum

Results gained from real-time PCR using *AccuPower*[®] HBV Quantitative PCR Kit (HBV-1111, Bioneer) and *Exicycler*[™] 96 Real-Time Quantitative Thermal Block (A-2060) after extracting HBV viral DNA from serum samples.



Figure 3. Viral DNA Extraction using $\mathit{ExiPrep^{\mathsf{M}}}$ Plus Viral DNA/RNA Kit from HCV serum

Results gained from real-time RT-PCR using *AccuPower*[®] HCV Quantitative PCR Kit (HCV-1111, Bioneer) and *Exicycler*[™] 96 Real-Time Quantitative Thermal Block (A-2060) after extracting HCV viral RNA from serum samples.

Specifications

Dimension (cm) 32 (W) x 53.5 (D) x 48.7 (H)	
	Dimension (cm)
Neight 22 kg	Weight
/oltage / Frequency 100~240 VAC, 50/60 Hz	Voltage / Frequency
Heat Block 40~90 °C	Heat Block
Temperature range 15~35 °C	Temperature range
Humidity range 20 ~ 80%, no condensation	Humidity range
Dperating system Standalone	Operating system
Communications TCP/IP	Communications
Jser interface 320 x 240 touch screen graphic LCD	User interface
JV sterilization 15 minute cycle	UV sterilization



I Ordering Information

Cat. No.	Product Description	
A-5030	<i>ExiPrep</i> ™16 Plus	
Cat. No.	Related Kit Description	Sample Sources
Genomic DNA		
K-4211	<i>ExiPrep</i> ™ Plus Blood Genomic DNA Kit	Whole blood
K-4214	<i>ExiPrep</i> ™ Plus Bacteria Genomic DNA Kit	Urine, Swabs, Yeast, Gram (-) bacteria (~1x10 ⁹ cells) Gram (+) bacteria (~1x10 ⁹ cells)
K-4215	<i>ExiPrep</i> ™ Plus Plant Genomic DNA Kit	Plant tissue, seed (100 mg)
K-4217	<i>ExiPrep</i> ™ Plus Seed Genomic DNA Kit	Plant seed, tissue, root
Total RNA		
K-4244	<i>ExiPrep</i> ™ Plus Plant Total RNA Kit	Plant tissue, seed (100 mg)
Viral DNA/RNA		
K-4271	<i>ExiPrep</i> ™ Plus Viral DNA/RNA Kit	Serum & Plasma, Urine, cell free body fluid, Swabs

Application

•For University and Corporate Laboratories: Nucleic acid extraction from various samples

•For Hospital/Clinic Laboratories: Nucleic acid extraction from samples such as blood, tissue, sputum, etc. for various molecular diagnostic tests

•For Food Companies: Food sample preparation for GMO or contamination testing

·For Military or Police:

Sample preparation for detecting various bacteria and/or virus used in bioterrorism or food poisoning

·Public Health Offices:

Sample preparation for public health threats such as STDs and tuberculosis



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