C

DNA/RNA Purification

Automatic Nucleic Acid Extraction Kits
Spin column type manual Nucleic Acid Extraction Kits
96-Well vacuum block type Nucleic Acid Extraction Kits
Solution type manual Nucleic Acid Extraction Kits
Accessory

DNA/RNA Purification
Phone: +82-42-930-8777 Email: accuprep-support@bioneer.com
Email: exiprep-support@bioneer.com

01

Automated Nucleic Acid Extraction Kits

Automated Nucleic Acid Extraction Kits

Blood Genomic DNA Kit

■ Description

This is a product designed to extract high-purity genomic DNA from whole blood samples using the automated nucleic acid extraction instruments from the *ExiPrep*™16 series (*ExiPrep*™16 S*, *ExiPrep*™16 Plus, *ExiProgen*™ and *ExiPrep*™16 Dx).

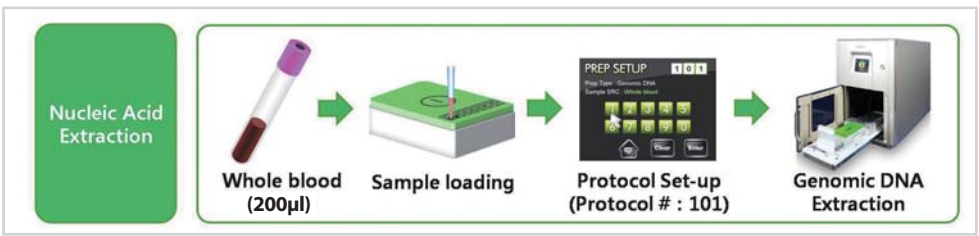
This product contains a buffer system optimized for the efficient extraction of genomic DNA from whole blood samples. User Convenience is maximized by providing all required or reagents within the Kit: enzymes (Proteinase K and RNase A) and buffers within the buffer cartridges, elution tubes for keeping the extracted nucleic acids and disposable filter tips for use during nucleic acid extraction. This product uses a lysis buffer and Proteinase K to lyse cells efficiently and digest proteins within whole blood for the efficient extraction of genomic DNA. The binding buffer and spherical silica magnetic nanoparticles bind genomic DNA to the surface of the beads. The wells are then subject to a magnetic field, forcing the genomic DNA-bound spherical silica magnetic particles to remain within each well while the reaction mixture and cellular waste are removed. Three types of wash buffers are introduced sequentially during in the next step to remove the remainder of cellular waste products. The wash buffers are then pipetted off, while the genomic DNA-bound silica magnetic particles remain in the wells by the magnetic field. DNase-free elution buffer is then introduced to the silica magnetic particles, which are gently heated, to facilitate the release of the pure genomic DNA.

* *ExiPrep*™ 16 S are discontinued, but Bioneer continues to support them with Kits.

■ Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit
  (Disposable filter tip, Elution tube, and Reaction tube)
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximizes binding and increases elution efficiency
- High purity & high yield
- **Reproducible results** : Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time.
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start.

■ Procedure



01 Automatic Nucleic Acid Extraction Kits

Blood Genomic DNA Kit

Application

PCR, Quantitative Real-Time PCR, Cloning, SNP analysis, Pharmacogenomics, and Genetics.

Specifications

Starting culture volume	Up to 200 µl
Elution volume	50 - 200 µl
Expected Yield	3 - 5 µg
Expected purity ($A_{260/280}$)	> 1.8

Experimental Data

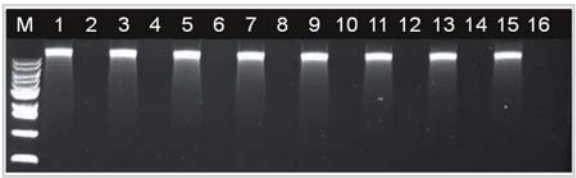


Figure 1. Agarose gel electrophoresis results of genomic DNA extracted from whole blood.
Agarose gel electrophoresis results of 100 ng genomic DNA extracted from 200 µl whole blood sample.

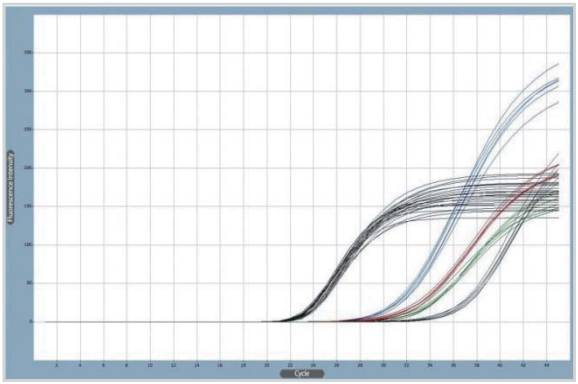


Figure 2. Real-Time PCR results of genomic DNA extracted from whole blood.
Real-time PCR results using five primer/probe sets of targets related to Alzheimer's Disease and run on *Exicycler*™ 96 Real-Time PCR System (Cat. No.: A-2060) from genomic DNA extracted from 200 µl whole blood samples.

Ordering Information

Cat. No.	Product Description	Instrument type
K-4211	*ExiPrep*™ Plus Blood Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4311	*ExiProgen*™ Blood Genomic DNA Kit, 96 reactions	*ExiProgen*™
K-4411	*ExiPrep*™ Dx Blood Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Dx

Tissue Genomic DNA Kit

Description

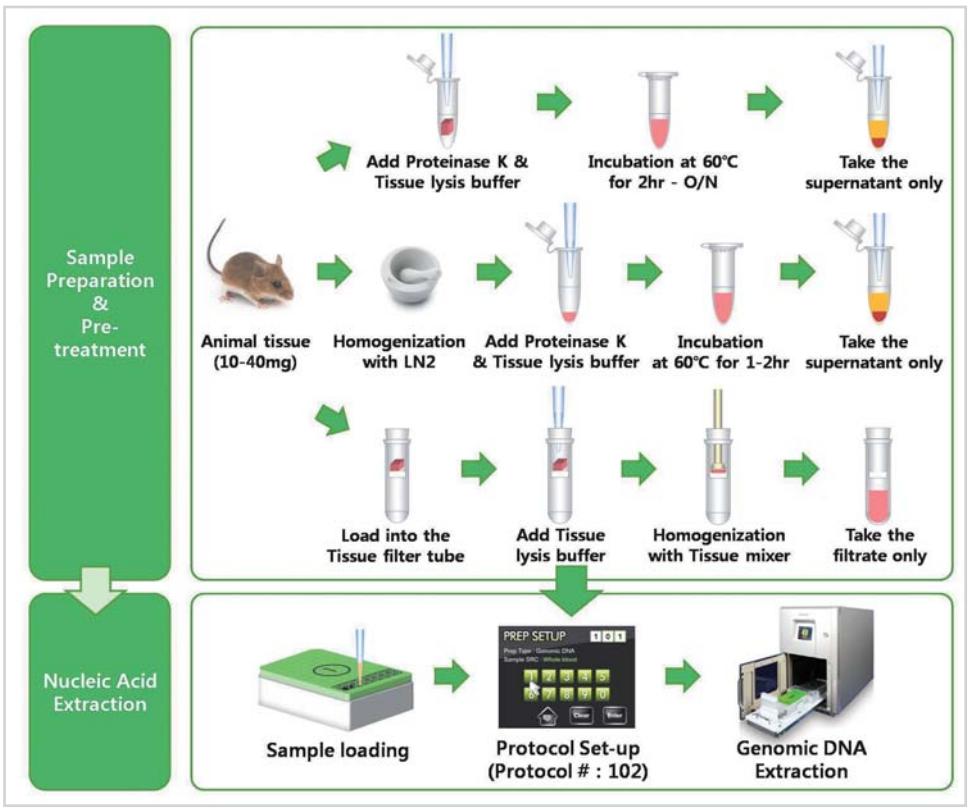
This is a product designed to extract high-purity genomic DNA from various animal tissue samples including liver, kidney, brain, skeletal muscle, tail tips, an etc. using the automated nucleic acid extraction instrument of the *ExiPrep*™16 series (*ExiPrep*™16*, *ExiPrep*™16 S*, *ExiPrep*™16 Plus, *ExiProgen*™ and *ExiPrep*™16 Dx). This product uses our unique Tissue lysis buffer with Proteinase K to efficiently dissociate tissues and digest proteins for the efficient extraction of genomic DNA. The binding buffer and spherical silica magnetic particles bind genomic DNA to the surface of the beads. The wells are then subject to a magnetic field, forcing the genomic DNA-bound silica magnetic particles to remain within the well while the reaction mixture and cellular waste are removed. Three types of wash buffers are introduced sequentially during in the next steps to remove the remaining cellular waste products. The washing buffers are then pipetted off, while the genomic DNA-bound spherical silica magnetic particles remain in the wells due to the magnetic field. DNase-free elution buffer is then introduced to the silica magnetic particles to facilitate the release of the pure, genomic DNA.

* The *ExiPrep*™ 16 and *ExiPrep*™ 16 S are discontinued, but Bioneer continues to support them with Kits.

Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube, and Reaction tube)
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximizes binding and increases elution efficiency
- High purity & high yield
- Reproducible results : Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time.
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start.

Procedure



01 Automatic Nucleic Acid Extraction Kits

Tissue Genomic DNA Kit

Application

PCR, Quantitative Real-Time PCR, Gene cloning, SNP analysis, Genetics.

Specifications

Starting Sample amount	Up to 25 mg
Elution volume	50 - 100 µl
Expected yield	5 - 20 µg
Expected purity ($A_{260/280}$)	> 1.8

Experimental Data

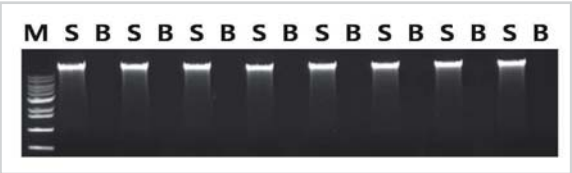


Figure 1. Results of gel electrophoresis of genomic DNA extracted from 25mg mouse lung tissue.
Yields were on average 15-20 µg and purities ($A_{260/280}$) were at least 1.8. Also, to observe cross-contamination that may occur during the extraction process, the mouse tissue samples were placed in a checkerboard pattern, and the rest of the wells were filled with dH_2O. No cross-contamination could be detected.

M; Size marker, S; Extraction with mouse tissue sample, B; Extraction with D.W. only

Ordering Information

Cat. No.	Product Description	Instrument type
K-3225	*ExiPrep*™ Tissue Genomic DNA Kit, 96 reactions	*ExiPrep*™16
K-4212	*ExiPrep*™ Plus Tissue Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4312	*ExiProgen*™ Tissue Genomic DNA Kit, 96 reactions	*ExiProgen*™
K-4412	*ExiPrep*™ Dx Tissue Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Dx
KA-7030	Tissue Homogenization Set, 100 reactions	

Bacteria Genomic DNA Kit

Description

This is a product designed to extract high-purity genomic DNA from Gram (-) Bacteria and Gram (+) Bacteria samples using the automated nucleic acid extraction instruments of the *ExiPrep*™16 series (*ExiPrep*™16*, *ExiPrep*™16 S*, *ExiPrep*™16 Plus, *ExiProgen*™ and *ExiPrep*™16 Dx). Bacteria Genomic DNA utilizes a resuspension buffer that efficiently disrupts cells and proteins for efficient extraction of genomic DNA. Gram (+) bacteria needs specific pre-treatment before the re-suspension step using Lyticase or Lysozyme (not included). The binding buffer and spherical silica magnetic particles will bind genomic DNA to the surface of the beads. The reaction containers are then subject to a magnetic field, forcing the genomic DNA-bound silica magnetic particles to remain within the wells while the reaction mixture and cellular waste are removed. Three types of wash buffers are introduced sequentially during in the next step to remove the remainder of the cellular waste products. The wash buffers are then pipetted off, while the genomic DNA-bound spherical silica magnetic particles remain bound by the magnetic field. DNase-free elution buffer is then introduced to the silica magnetic particles to release the now purified genomic DNA.

* The *ExiPrep*™ 16 and *ExiPrep*™ 16 S are discontinued, but Bioneer continues to support them with Kits.

Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube, and Reaction tube)
- Optimized Resuspension buffer for the bacterial cell suspension
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximizes binding and increases elution efficiency
- High purity & high yield
- Reproducible results : Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time.
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start.

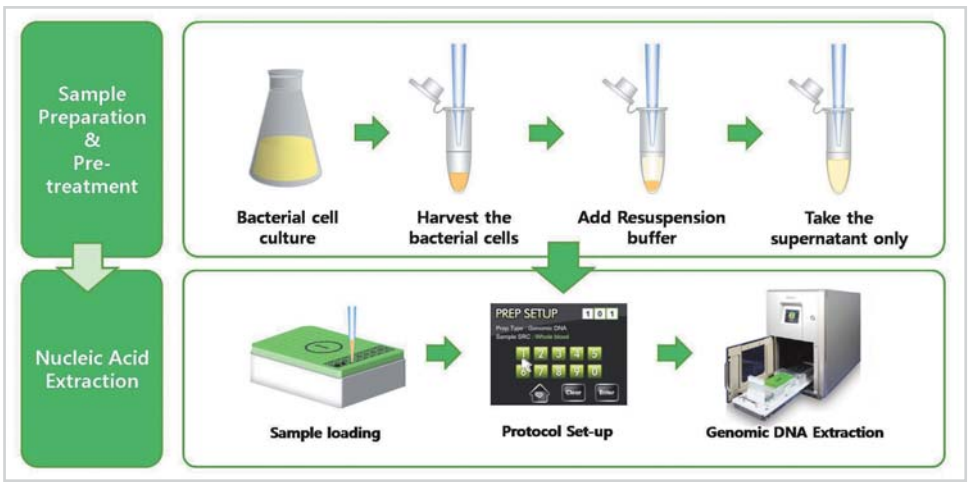
Application

PCR, Quantitative Real-Time PCR, Gene cloning, Genetics, Classification of bacteria.

Specifications

Starting sample amount	Up to 1X10^9 cells
Elution volume	50 - 100 µl
Expected yield	Up to 10 µg
Expected purity ($A_{260/280}$)	> 1.8

Procedure



01 Automatic Nucleic Acid Extraction Kits

Bacteria Genomic DNA Kit

Experimental Data

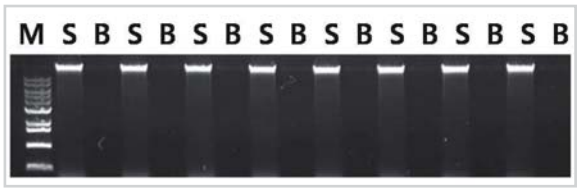
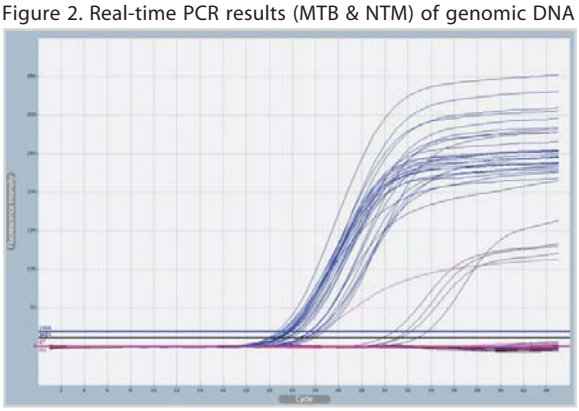


Figure 1. Results of gel electrophoresis of genomic DNA extracted from *E.coli* cells ($1X10^9$ cells).
Yields were on average 8-12μg and purities ($A_{260/280}$) were at > 1.8. Also, to observe cross-contamination that may occur during the extraction process, the *E.coli* cells ($1X10^9$ cells) were placed in a checkerboard pattern, and the rest of the wells were filled with dH_2O. No cross-contamination could be detected.
M; Size marker, S; Extraction with *E.coli* cells ($1X10^9$ cells) sample, B; Extraction with dH_2O only.

Figure 2. Real-time PCR results (MTB & NTM) of genomic DNA



extracted from sputum samples

Real-Time PCR results using an *AccuPower*® MTB & NTM EX Real-Time PCR Kit (MTN-1111, Bioneer) and run on *Exicycler*™ 96 Real-Time PCR System (A-2060, Bioneer) from genomic DNA extracted from 10 ml of sputum samples.

Ordering Information

Cat. No.	Product Description	Instrument type
K-3245	*ExiPrep*™ Bacteria Genomic DNA Kit, 96 reactions	*ExiPrep*™16
K-4214	*ExiPrep*™ Plus Bacteria Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4314	*ExiProgen*™ Bacteria Genomic DNA Kit, 96 reactions	*ExiProgen*™
K-4414	*ExiPrep*™ Dx Bacteria Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Dx

Plant Genomic DNA Kit

Description

This is a product designed to extract high-purity genomic DNA from various plant samples including leaf tissues, seeds, roots etc. using the automated nucleic acid extraction instruments of the *ExiPrep*™ 16 series (*ExiPrep*™ 16*, *ExiPrep*™ 16 Plus and *ExiProgen*™). This product uses our unique Plant lysis buffer with Proteinase K contained to efficiently dissrupt plant tissues and proteins for efficient extraction of genomic DNA. The binding buffer and spherical silica magnetic particles will bind genomic DNA to the surface of the beads. The wells are then subject to a magnetic field, forcing the genomic DNA-bound silica magnetic particles to remain within the wells while the reaction mixture and cellular waste are removed. Three types of wash buffers are introduced sequentially during in the next step to remove the remainder of cellular waste products. The wash buffers are then pipetted off, while the genomic DNA-bound silica magnetic particles remain bound by the magnetic field. DNase-free elution buffer is then introduced to the silica magnetic particles to facilitate release of the purified genomic DNA.

* The *ExiPrep*™ 16 and *ExiPrep*™ 16 S are discontinued, but Bioneer continues to support them with Kits.

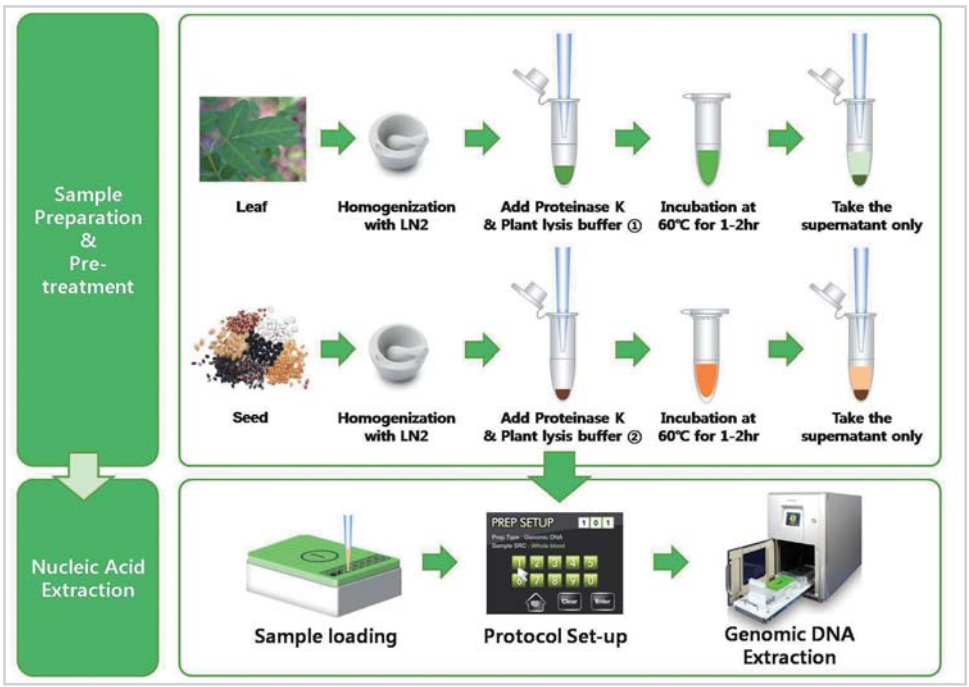
Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube, and Reaction tube)
- Optimized Plant Lysis buffer for the diverse plant samples
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximizes binding and increases elution efficiency
- High purity & high yield
- Reproducible results : Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time.
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start.

Application

PCR, Quantitative Real-Time PCR, Gene cloning, Genetics, GMO detection.

Procedure



01 Automatic Nucleic Acid Extraction Kits

Plant Genomic DNA Kit

■ Specifications

Starting sample amount	Up to 100 mg
Elution volume	50 - 100 µl
Expected Yield	3 - 5 µg
Expected Purity ($A_{260/280}$)	> 1.8

■ Experimental Data

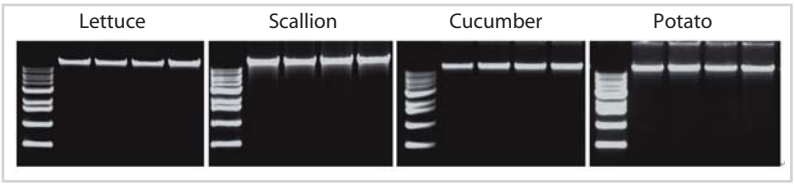


Figure 1. Results of gel electrophoresis of genomic DNA extracted from plant leaf tissue (100 mg).
Yields were on average 3-5 µg and purities ($A_{260/280}$) were at least 1.8.

■ Ordering Information

Cat. No.	Product Description	Instrument type
K-3255	*ExiPrep*™ Plant Genomic DNA Kit, 96 reactions	*ExiPrep*™16
K-4215	*ExiPrep*™ Plus Plant Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4315	*ExiProgen*™ Plant Genomic DNA Kit, 96 reactions	*ExiProgen*™

Beef Genomic DNA Kit

Description

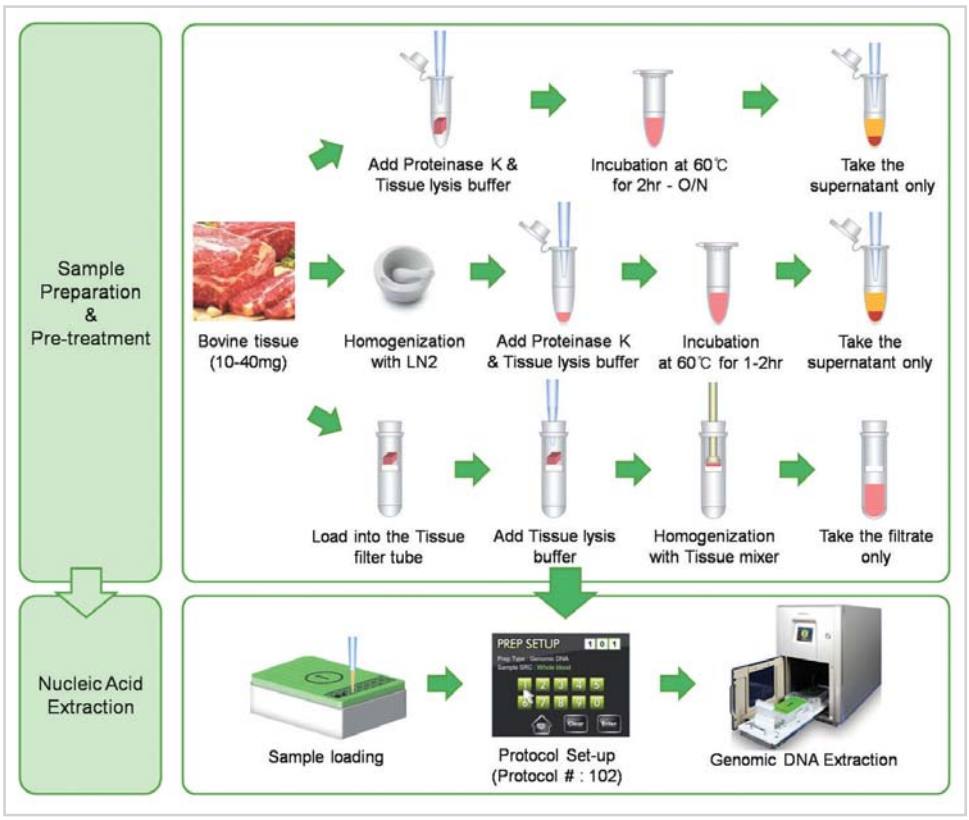
This is a product designed to extract high-purity genomic DNA from beef tissue samples. Using the automated nucleic acid extraction instruments of the *ExiPrep*™ 16 series (*ExiPrep*™ 16*, *ExiPrep*™ 16 Plus and *ExiProgen*™). This product uses our unique Tissue lysis buffer with Proteinase K to efficiently dissociate tissues and digest proteins for the efficient extraction of beef tissue genomic DNA. User convenience is maximized by providing all required components within the Kit: enzymes (Proteinase K and RNase A) and buffers within the buffer cartridges, elution tubes for keeping the extracted nucleic acids and disposable filter tips for use during nucleic acid extraction.

* The *ExiPrep*™ 16 is discontinued, but Bioneer continues to support them with Kits.

Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube, and Reaction tube)
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximizes binding and increases elution efficiency
- High purity & high yield
- **Reproducible results** : Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time.
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start.

Procedure



01 Automatic Nucleic Acid Extraction Kits

Beef Genomic DNA Kit

■ Application

PCR, Quantitative Real-Time PCR, Gene cloning, SNP analysis, Genetics.

■ Specifications

Starting tissue amount	10 - 40 mg
Elution volume	50 - 100 µl
Expected yield	Up to 10 µg
Expected purity ($A_{260/280}$)	> 1.8

■ Experimental Data

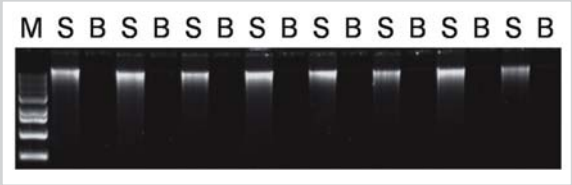


Figure 1. Results of gel electrophoresis of genomic DNA extracted from 40 mg beef tissue.
M; Size marker, S; Extraction with beef tissue sample, B; Extraction with D.W only

■ Ordering Information

Cat. No.	Product Description	Instrument type
K-3200-CB	*ExiPrep*™ Beef Genomic DNA Kit, 96 reactions	*ExiPrep*™16
K-4216	*ExiPrep*™ Plus Beef Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4316	*ExiProgen*™ Beef Genomic DNA Kit, 96 reactions	*ExiProgen*™

Rice Genomic DNA Kit

Description

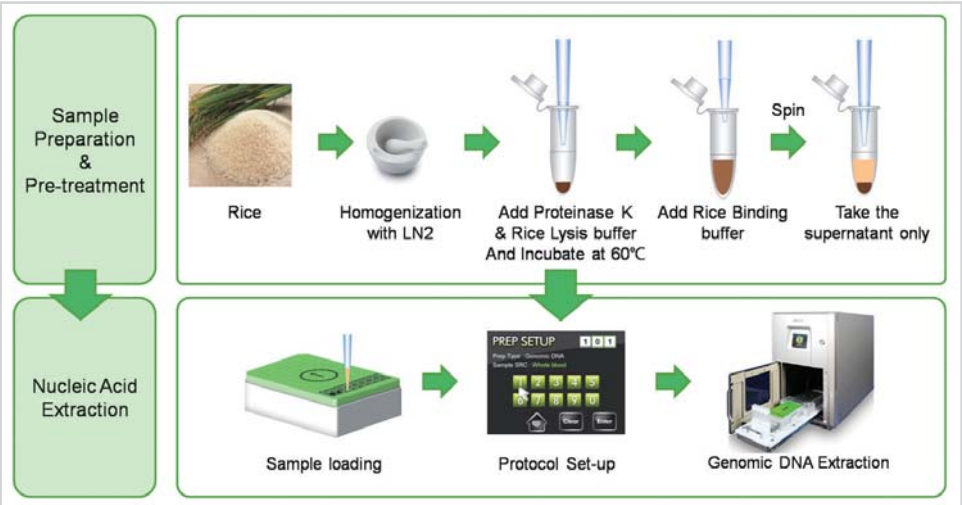
This is a product designed to extract high-purity genomic DNA from rice samples. Using the automated nucleic acid extraction instruments of the *ExiPrep*™ 16 series (*ExiPrep*™ 16*, *ExiPrep*™ 16 Plus and *ExiProgen*™). This product uses our unique Tissue lysis buffer with Proteinase K to efficiently dissociate tissues and digest proteins for the efficient extraction of rice genomic DNA. User convenience is maximized by providing all required or reagents within the Kit: enzymes (Proteinase K and RNase A) and buffers within the buffer cartridges, elution tubes for keeping the extracted nucleic acids and disposable filter tips for use during nucleic acid extraction.

* The *ExiPrep*™ 16 is discontinued, but Bioneer continues to support them with Kits.

Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube, and Reaction tube)
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximizes binding and increases elution efficiency
- High purity & high yield
- Reproducible results : Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time.
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start.

Procedure



01 Automatic Nucleic Acid Extraction Kits

Rice Genomic DNA Kit

Application

PCR, Quantitative Real-Time PCR, Gene cloning, SNP analysis, Genetics.

Specifications

Starting tissue amount	10 - 20 mg
Elution volume	50 µl
Expected yield	1 - 2 µg
Expected purity ($A_{260/280}$)	> 1.8

Experimental Data

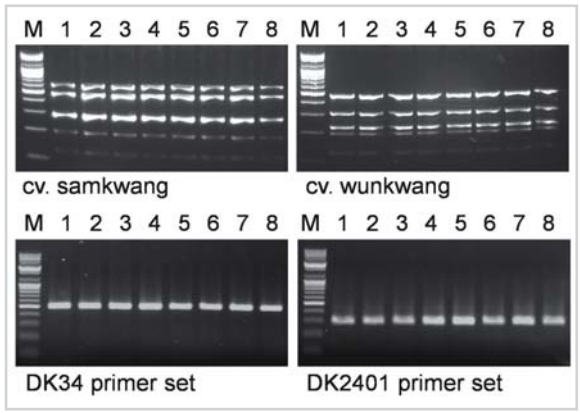


Figure 1. Electrophoresis result from rice sample.

Ordering Information

Cat. No.	Product Description	Instrument type
K-3200-CR	*ExiPrep*™ Rice Genomic DNA Kit, 96 reactions	*ExiPrep*™16
K-4217	*ExiPrep*™ Plus Rice Genomic DNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4317	*ExiProgen*™ Rice Genomic DNA Kit, 96 reactions	*ExiProgen*™

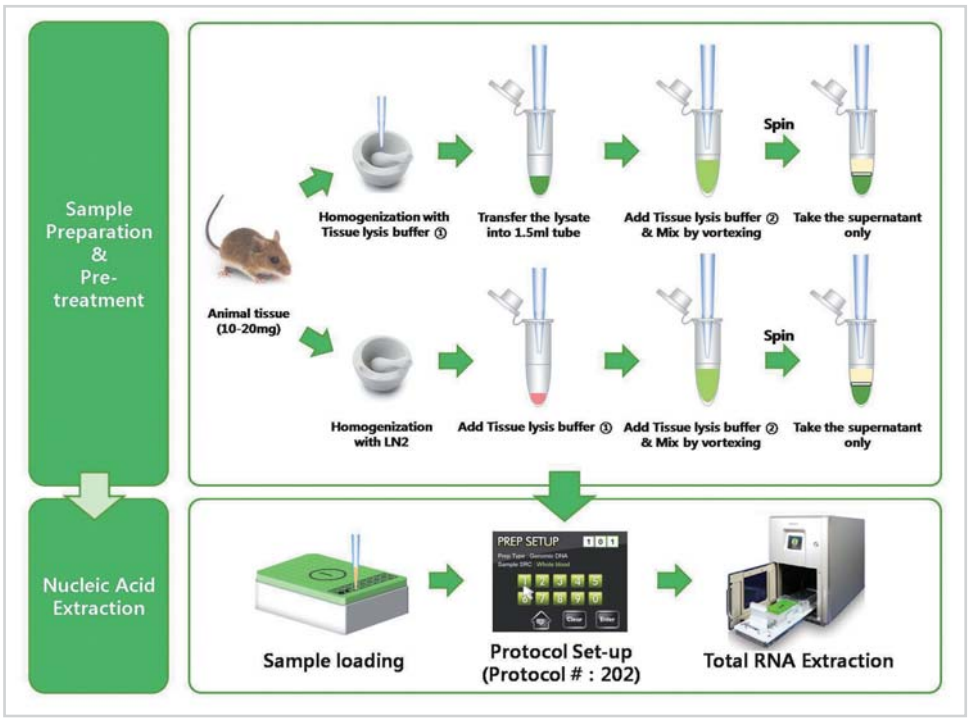
Tissue Total RNA Kit

■ Description

This is a product designed to extract high-purity total RNA from cultured cell samples using the automated nucleic acid extraction instruments *ExiPrep*™ 16 series (*ExiPrep*™ 16*, *ExiPrep*™ 16 Plus, *ExiProgen*™). The tissue lysis buffer contained within the product will efficiently dissociate tissues and digest proteins for efficient extraction of total RNA without degradation. The binding buffer and spherical silica magnetic particles will bind total RNA to the surface of the beads. The reaction containers are then subject to a magnetic field, forcing the total RNA-bound silica magnetic particles to remain within the wells while the reaction mixture and cellular waste are removed. Three types of wash buffers are introduced sequentially during in the next step to remove the remainder of cellular waste products. The wash buffers are then pipetted off, while the total RNA-bound silica magnetic particles remain bound by the magnetic field. RNase-free elution buffer is then introduced to the silica magnetic particles to facilitate the release of the purified total RNA.

* The *ExiPrep*™ 16, *ExiPrep*™ 16 S are discontinued, but Bioneer continues to support them with Kits.

■ Procedure



01 Automatic Nucleic Acid Extraction Kits

Tissue Total RNA Kit

Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube, and Reaction tube)
- Optimized Tissue Lysis buffer for the diverse tissue samples
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximize binding and increase elution efficiency
- High purity & high yield
- Reproducible results : Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start

Application

RT-PCR, Quantitative Real-Time RT-PCR, cDNA synthesis, Chip-array analysis

Specifications

Starting tissue amount	$1X10^6$ cells
Elution volume	50 - 100 µl
Expected Yield	Up to 10 µg
Expected Purity ($A_{260}/_{280}$)	>1.9

Experimental Data

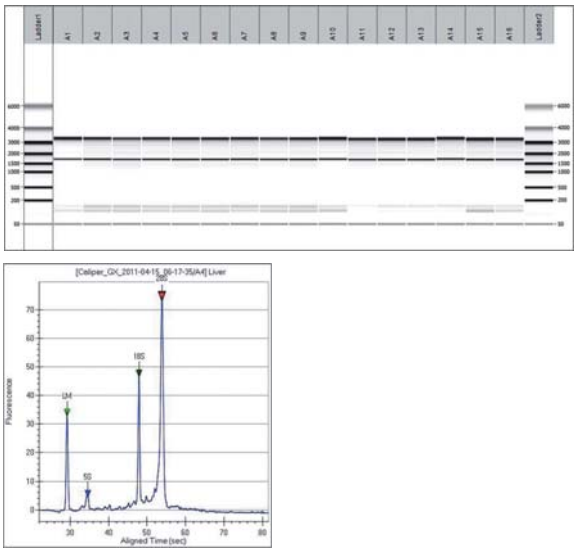


Figure 1. Results of capillary electrophoresis of total RNA extracted from tissue sample(rat liver, 15mg) using LabChip® GX (Caliper Life Science, USA).

Ordering Information

Cat. No.	Product Description	Instrument type
K-3325	*ExiPrep*™ Tissue Total RNA Kit, 96 reactions	*ExiPrep*™16
K-4242	*ExiPrep*™ Plus Tissue Total RNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4342	*ExiProgen*™ Tissue Total RNA Kit, 96 reactions	*ExiProgen*™

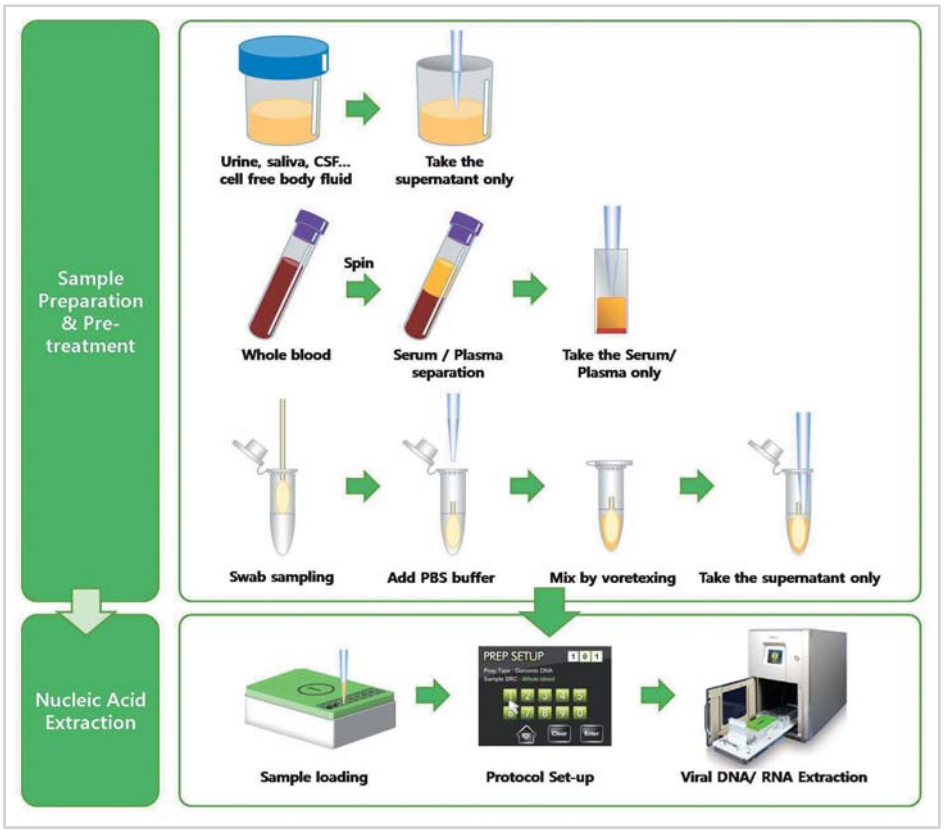
Viral DNA/ RNA Kit

Description

This is a product designed to extract high-purity viral DNA/ RNA from serum, plasma, CSF, saliva, swab and cell free body fluid samples using the automated nucleic acid extraction instruments *ExiPrep*™ 16 series (*ExiPrep*™ 16, *ExiPrep*™ 16 S, *ExiPrep*™ 16 Plus, *ExiProgen*™, and *ExiPrep*™ 16 Dx). The binding buffer and spherical silica magnetic particles will bind viral DNA/ RNA to the surface of the beads. The reaction containers are then subject to a magnetic field, forcing the viral DNA/ RNA-bound silica magnetic particles to remain within the wells while the reaction mixture and cellular waste are removed. Three types of wash buffers are introduced sequentially during in the next step to remove the remainder of cellular waste products. The wash buffers are then pipetted off, while the viral DNA/ RNA-bound silica magnetic particles remain bound by the magnetic field. DNase RNase-free elution buffer is then introduced to the silica magnetic particles to facilitate the release of the purified viral DNA/ RNA.

* The *ExiPrep*™ 16 and *ExiPrep*™ 16 S are discontinued, but Bioneer continues to support them with Kits.

Procedure



01 Automatic Nucleic Acid Extraction Kits

Viral DNA/ RNA Kit

Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube, and Reaction tube)
- Up to 16 samples per one run
- Silica coated spherical magnetic nano-bead maximizes binding and increases elution efficiency
- High purity & high yield
- Reproducible results: Nucleic acid extractions occur with the buffer cartridges through the automated nucleic acid extraction instrument, allowing for reproducible performance every time
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start.

Application

PCR, RT-PCR, Quantitative Real-Time PCR, Quantitative Real-Time RT-PCR.

Experimental Data

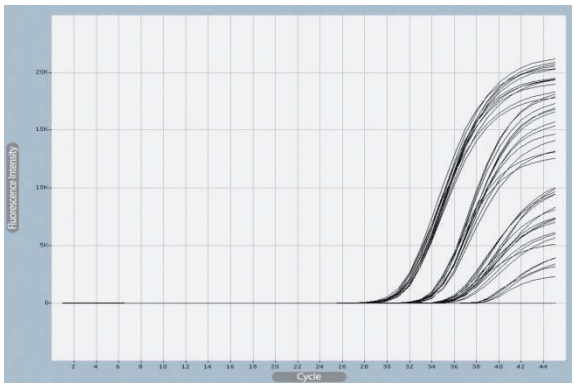


Figure 1. Reproducible viral DNA extraction from HBV in serum Real-Time PCR results using an *AccuPower*® HBV Quantitative PCR Kit (HBV-1111, Bioneer) and run on *Exicycler*™ 96 Real-Time Quantitative Thermal Block (A-2060, Bioneer) with extracted viral DNA.

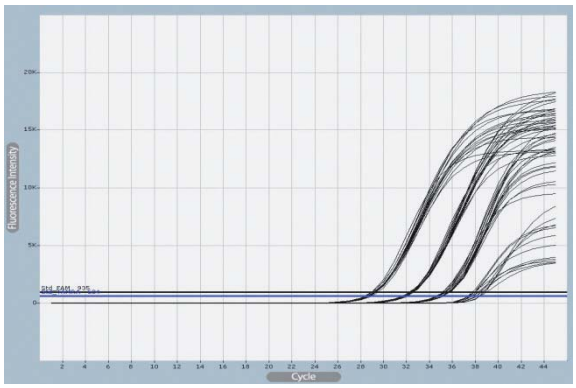


Figure 2. Reproducible viral RNA extraction from HIV in serum Real-Time RT-PCR results using an *AccuPower*® HCV Quantitative RT-PCR Kit (HCV-1111, Bioneer) and run on *Exicycler*™ 96 Real-Time Quantitative Thermal Block (A-2060, Bioneer) with extracted viral RNA.

Ordering Information

Cat. No.	Product Description	Instrument type
K-3535	*ExiPrep*™ Viral DNA/ RNA Kit, 96 reactions	*ExiPrep*™16
K-4271	*ExiPrep*™ Plus Viral DNA/ RNA Kit, 96 reactions	*ExiPrep*™16 Plus
K-4371	*ExiProgen*™ Viral DNA/ RNA Kit, 96 reactions	*ExiProgen*™
K-4471	*ExiPrep*™ Dx Viral DNA/ RNA Kit, 96 reactions	*ExiPrep*™16 Dx

Gel Extraction Kit

Description

Gel Extraction Kit extracts various sizes of fragment DNA from agarose gel using an automated extraction instrument, *ExiProgen*™, with high recovery.

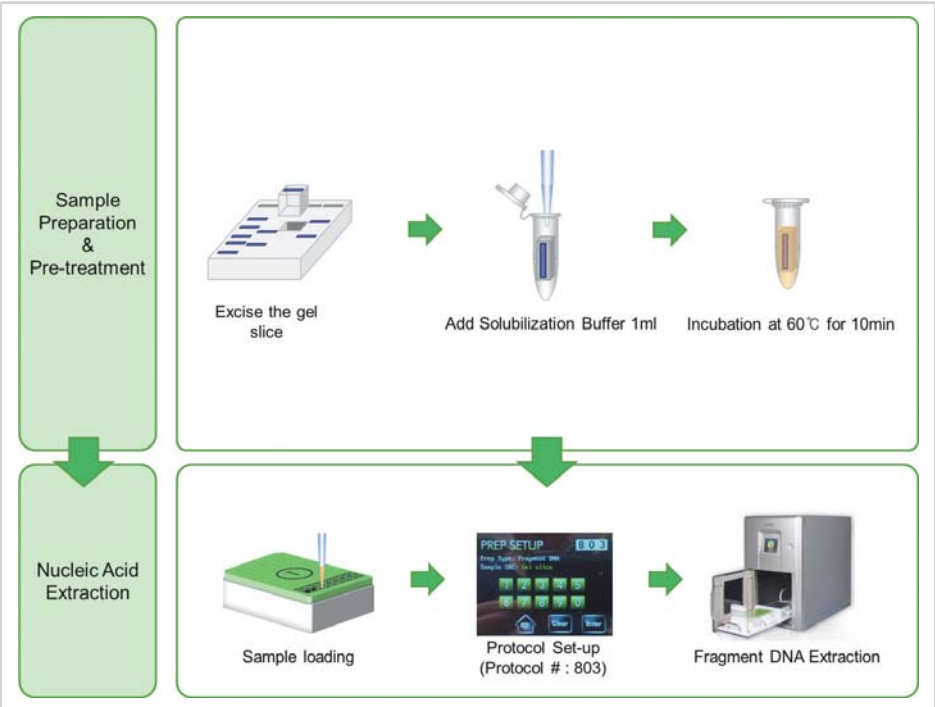
Features and Benefits

- Pre-filled Buffer cartridge system
- All consumables included in the Kit (Disposable filter tip, Elution tube and Reaction tube)
- The Kit handles up to 16 genomic DNA extractions in a single run.
- Bioneer's patented magnetic silica beads ensure high yield and purity.
- The Kit provides solubilization buffer optimized for the extraction of various size fragment DNA.
- The Kit extracts fragment DNA with high purity and high recovery
- The Kit generates reproducible results on *ExiProgen*™
- Plug-n-Prep simplicity – Simply add samples to the cartridge and press start

Application

Gene cloning, Sequencing, Ligation, Transformation, Restriction digestion, Labeling, Microinjection, PCR, *in vitro* transcription, Protein synthesis (*in vitro* translation)

Procedure



01 Automatic Nucleic Acid Extraction Kits

Gel Extraction Kit

Specifications

Starting Sample amount	Up to 500 mg (agarose gel weight)
Elution volume	50 µl
Recovery	>80%
Expected Yield	Up to 10 µg
Expected Purity ($A_{260/280}$)	>1.8

Experimental Data

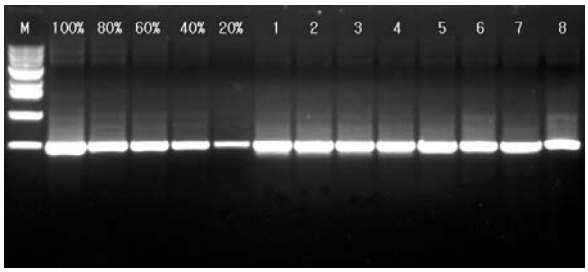


Figure 1. SDS-PAGE of fragment DNAs obtained from gel extraction.
Lane M; 1Kb DNA Ladder (D-1040, Bioneer), Lane 1, 2, 3, 4; *ExiProgen*™ Gel extraction Kit (K-4391, Bioneer), Lane 5, 6, 7, 8; Company A's Kit.

Ordering Information

Cat. No.	Product Description	Instrument type
K-4391	*ExiProgen*™ Gel Extraction Kit, 96 reactions	*ExiProgen*™

02 Spin column type manual Nucleic Acid Extraction Kits

02
Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Nano-Plus Plasmid Mini Extraction Kit

Description

AccuPrep® Nano-Plus Plasmid Mini Extraction Kit extracts highly-purified plasmid DNA from cultured *E. coli* cells in 10 minutes. The overall principle utilizes a modified alkaline lysis protocol that is enhanced by patented Bioneer's novel Nano-Technology.

Features and Benefits

- Principle is based on the modified alkaline lysis protocol combined with a novel nano-particle technology
- Suitable for high-copy and low copy number plasmid DNA.
- Highly purified and high purity plasmid DNA can be extracted from cultured *E. coli* cells in under 10 min.
- Endonuclease A denaturation buffer for the *end*A+ strains (Denaturation Buffer, Buffer D).
- Silica based DNA binding column with high DNA binding efficiency.

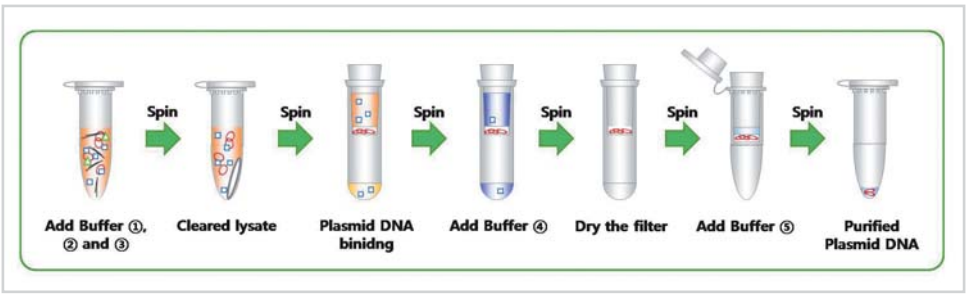
Application

Sub-cloning, Sequencing, Transformation, Transfection, *In-vitro* transcription/ translation.

Specifications

Starting culture volume	1 ml ~
Column binding capacity	> 20 µg
Elution volume	50 - 100 µl
Expected yield	Up to 20 µg
Preparation time	< 10 min

Procedure



AccuPrep® Nano-Plus Plasmid Mini Extraction Kit

■ Experimental Data

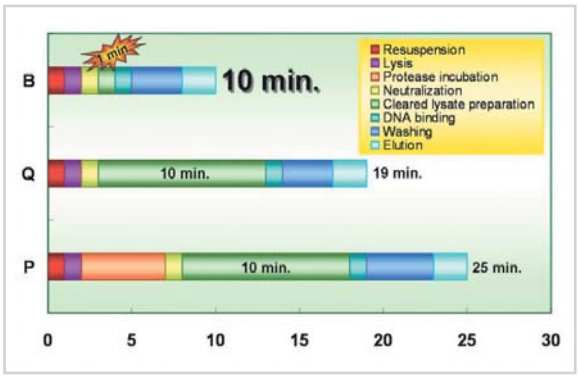


Figure 1. Reduced total time of preparation
The nano-particles which are included in Buffer ① (the Resuspension buffer) make a complex together with insoluble protein aggregate, cell debris and chromosomal DNA after the addition of the neutralization solution (buffer ③). This complex is heavier than that obtained with other alkaline lysis protocols and can be separated from the solution with a rapid centrifuge step (1 min.) to obtain the cleared lysate.

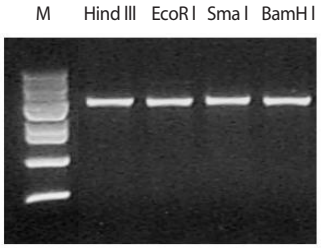


Figure 2. Digestion of extracted DNA with Restriction enzymes
Electrophoresis results with plasmid DNA extracted with the *AccuPrep*® Nano-Plus Plasmid Mini Extraction Kit after digestion with various restriction enzymes.
Left Gel; pBluescript SK(+), Right Gel; pBI121,
Lane M – DNA Molecular Weight Marker (Cat. No. D-1040, Bioneer)

■ Ordering Information

Cat. No.	Product Description
K-3111	*AccuPrep*® Nano-Plus Plasmid Mini Extraction Kit, 200 reactions
K-3112	*AccuPrep*® Nano-Plus Plasmid Mini Extraction Kit, 50 reactions
KB-0101	RNase A powder, lyophilized (6 mg/tube)
KA-0033-1	DNA Binding Column Tubes (50 ea X 4 box)

02
Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Nano-Plus Plasmid Midi Extraction Kit

Description

AccuPrep® Nano-Plus Plasmid Midi Extraction Kit extracts highly-purified plasmid DNA from cultured bacterial cells in 40 minutes. The overall principle utilizes a modified alkaline lysis protocol that is enhanced by patented Bioneer's novel Nano-Technology.

Features and Benefits

- Principle is based on modified alkaline lysis protocol combined with a novel nano particle technology
- Suitable for high-copy and low copy number plasmid DNA.
- Highly purified and high purity plasmid DNA can be extracted from cultured *E. coli* cells within 40 mins.

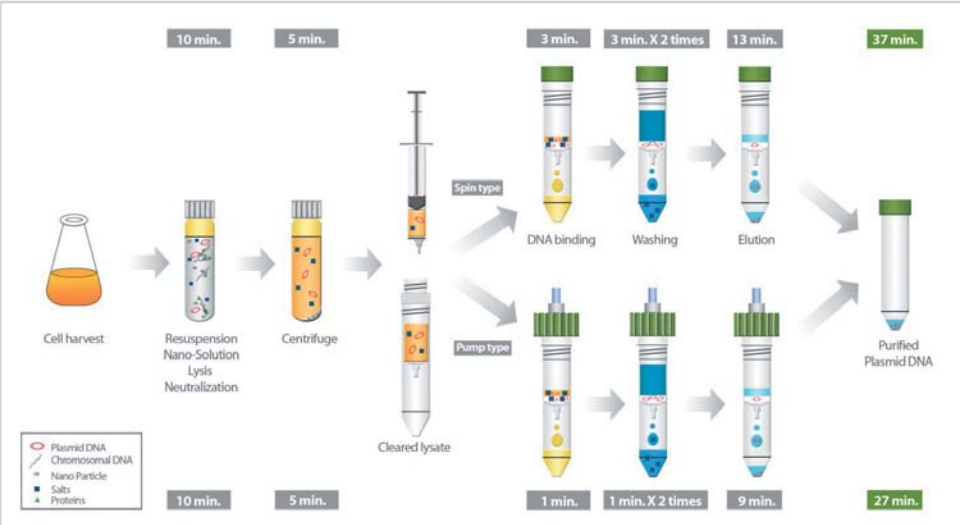
Application

Sub-cloning, Sequencing, Transformation, Transfection, *In-vitro* transcription/ translation.

Specifications

Starting culture volume	25 ml ~
Column binding capacity	> 100 µg
Elution volume	1 ml
Expected yield	Up to 75 - 100 µg
Preparation time	< 40 min

Procedure



AccuPrep® Nano-Plus Plasmid Midi Extraction Kit

■ Experimental Data

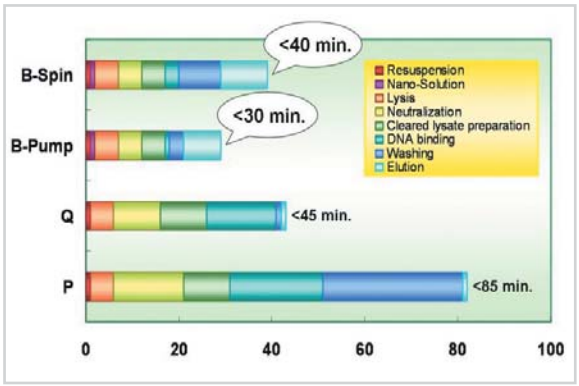


Figure 1. Reduced total time of preparation

The nano-particles which are included in Buffer ① (the Resuspension buffer) make a complex together with insoluble protein aggregate, cell debris and chromosomal DNA after the addition of the neutralization solution (buffer ③). This complex is heavier than that obtained with other alkaline lysis protocols and can be separated from the solution with a rapid centrifuge step (5 min.) to obtain the cleared lysate.

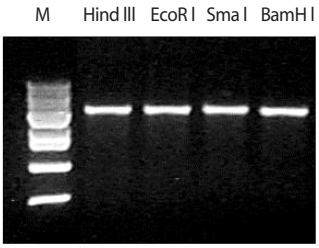


Figure 2. Digestion of extracted DNA with Restriction enzymes

Electrophoresis results with plasmid DNA extracted with the *AccuPrep*® Nano-Plus Plasmid Midi Extraction Kit after digestion with various restriction enzymes.
Left Gel; pBluescript SK(+), Right Gel; pBI121,
Lane M; DNA Molecular Weight Marker (Cat. No. D-1040, Bioneer)

■ Ordering Information

Cat. No.	Product Description
K-3122	*AccuPrep*® Nano-Plus Plasmid Midi Extraction Kit, 25 reactions

02
Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Nano-Plus Plasmid Maxi Extraction Kit

■ Description

AccuPrep® Nano-Plus Plasmid Maxi Extraction Kit extracts highly-purified plasmid DNA from cultured bacterial cells in 60 minutes. The overall principle utilizes a modified alkaline lysis protocol that is enhanced by patented Bioneer's novel Nano-Technology.

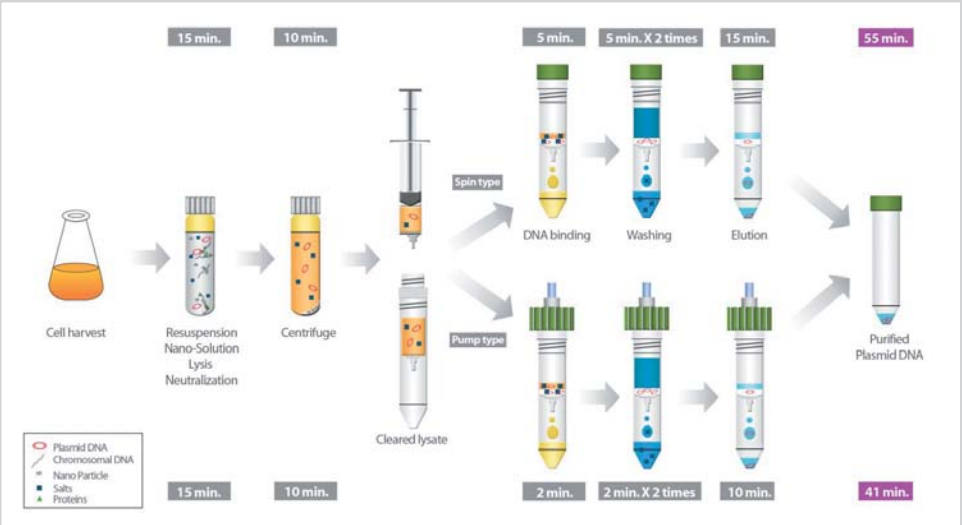
■ Features and Benefits

- Principle is based on the modified alkaline lysis protocol combined with a novel nano particle technology.
- Suitable for high-copy and low copy number plasmid DNA.
- Highly purified and high purity plasmid DNA can be extracted from cultured *E. coli* cells within 60 min.
- Endonuclease A denaturation buffer for the end A+ strains (Denaturation Buffer, Buffer D).
- Silica based DNA binding column with high DNA binding efficiency.

■ Application

Sub-cloning, Sequencing, Transformation, Transfection, *In-vitro* transcription/ translation.

■ Procedure



AccuPrep® Nano-Plus Plasmid Maxi Extraction Kit

■ Specifications

Starting culture volume	100 ml ~
Column binding capacity	> 500 µg
Elution volume	1 ml
Expected yield	Up to 300 - 500 µg
Preparation time	< 60 min

■ Experimental Data

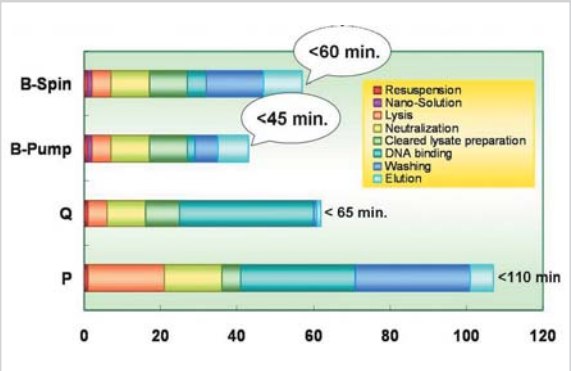


Figure 1. Reduced total time of preparation.
The nano-particles which are included in Buffer ① (the Resuspension buffer) make a complex together with insoluble protein aggregate, cell debris and chromosomal DNA after the addition of the neutralization solution (buffer ③). This complex is heavier than that obtained with other alkaline lysis protocols and can be separated from the solution with a rapid centrifuge step (10min.) to obtain the cleared lysate.

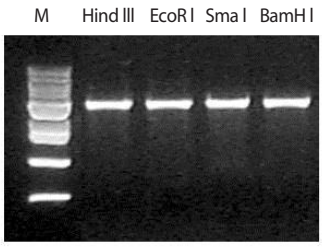


Figure 2. Digestion of extracted DNA with Restriction enzymes
Electrophoresis results with plasmid DNA extracted with the *AccuPrep*® Nano-Plus Plasmid Maxi Extraction Kit after digestion with various restriction enzymes.
Left Gel; pBluescriptSK(+), Right Gel; pBI121
Lane M; DNA Molecular Marker (Cat. No. D-1040, Bioneer)

■ Ordering Information

Cat. No.	Product Description
K-3131	*AccuPrep*® Nano-Plus Plasmid Maxi Extraction Kit, 25 reactions
K-3132	*AccuPrep*® Nano-Plus Plasmid Maxi Extraction Kit, 10 reactions

02
Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Plasmid Mini Extraction Kit

Description

The *AccuPrep*® Plasmid Extraction Kit is designed for the rapid extraction of high-purity plasmid DNA from bacterial cultures such as *E.coli*. As a column-type tube is utilized in the purification process, extraction is carried out in three simple steps of binding/ washing/ elution, and use of dangerous organic solvents is avoided, for the safe and convenient extraction of high-purity plasmid DNA.

Features and Benefits

- Silica based DNA binding column with high DNA binding capacity
- Endonuclease A denaturation buffer for the endA+ strains (Denaturation Buffer, Buffer D).
- Based on the modified alkaline lysis method
- 50-well tube rack for the storage of the extracted plasmid DNA.

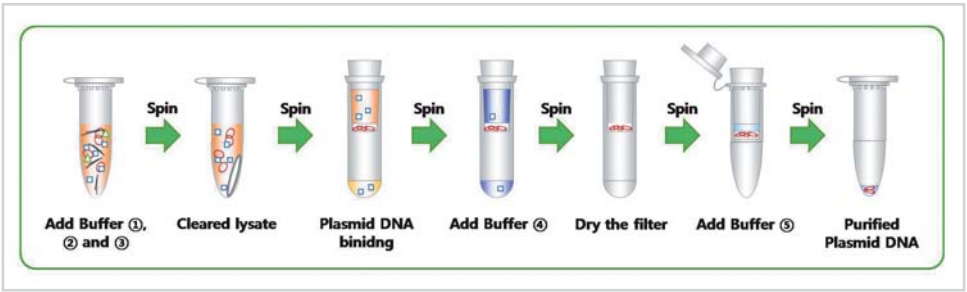
Application

Sub-cloning, Sequencing, Transformation, Transfection, *In-vitro* transcription/ translation

Specifications

Starting sample amount	1 ml ~ 10 ml
Column binding capacity	> 20 µg
Elution volume	50 - 100 µl
Expected yield	Up to 20 µg
Preparation time	< 30 min

Procedure



AccuPrep® Plasmid Mini Extraction Kit

■ Experimental Data

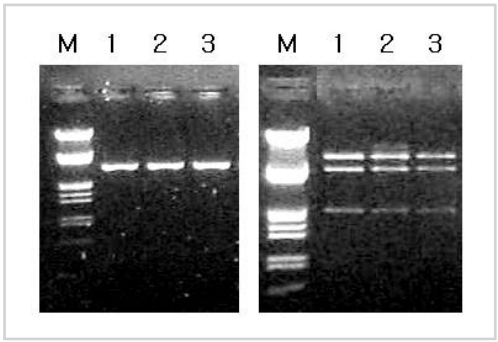


Figure 1. Digestion of extracted DNA with Restriction enzymes.
200 ng of extracted plasmid DNA (pBluescript SK(+)) was digested with XbaI.
Lane M; Molecular weight marker (λ DNA/*Hin*dIII+*Eco*RI, Cat. No. D-1070, Bioneer)
Lane 1; *AccuPrep*® Plasmid Mini Extraction Kit
Lane 2, 3; competitor Q and P

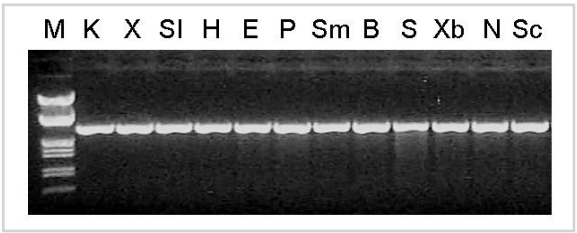


Figure 2. Digestion of extracted DNA with Restriction enzymes
200ng of extracted plasmid DNA (pBluescript SK(+)) was digested with various restriction enzymes.
Lane M; Molecular weight marker (λ DNA/*Hin*dIII+*Eco*RI, Cat. No., D-1070, Bioneer)
K; *Kpn* I, X; *Xho* I, SI; *Sal* I, H; *Hin*d III, E; *Eco*R I, P; *Pst* I, Sm; *Sma* I, B; *Bam* HI, S; *Spe* I, Xb; *Xba* I, N; *Not* I, Sc;*Sac* I

■ Ordering Information

Cat. No.	Product Description
K-3030	*AccuPrep*® Plasmid Mini Extraction Kit, 200 reactions
K-3030-1	*AccuPrep*® Plasmid Mini Extraction Kit, 50 reactions
KB-0101	RNase A powder, lyophilized (6 mg/tube)
KA-0033-1	DNA Binding Column Tubes (50 ea X 4 box)

02 Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® GMO DNA Extraction Kit

Description

AccuPrep® GMO DNA Extraction Kit allows the extraction of DNA from agricultural products such as beans, corn, and rice, or from processed foods such as bean sprouts, tofu and condensed milk, for the detection of GMOs. The Kit includes all reagents required for extraction, and in addition uses a column type extraction system to allow a faster and more convenient extraction of higher-quality DNA when compared to conventional methods. Large amounts of high-purity DNA can be extracted; for example, 20 - 40 µg of DNA for 1 g of powdered bean, with an A_{260}/A_{280} ratio of over 1.8.

Features and Benefits

- Highly purified and high yield genomic DNA can be extracted from various plant samples.
- Silica based DNA binding column with high binding capacity.
- Optimized plant lysis buffer for the efficient lysis.

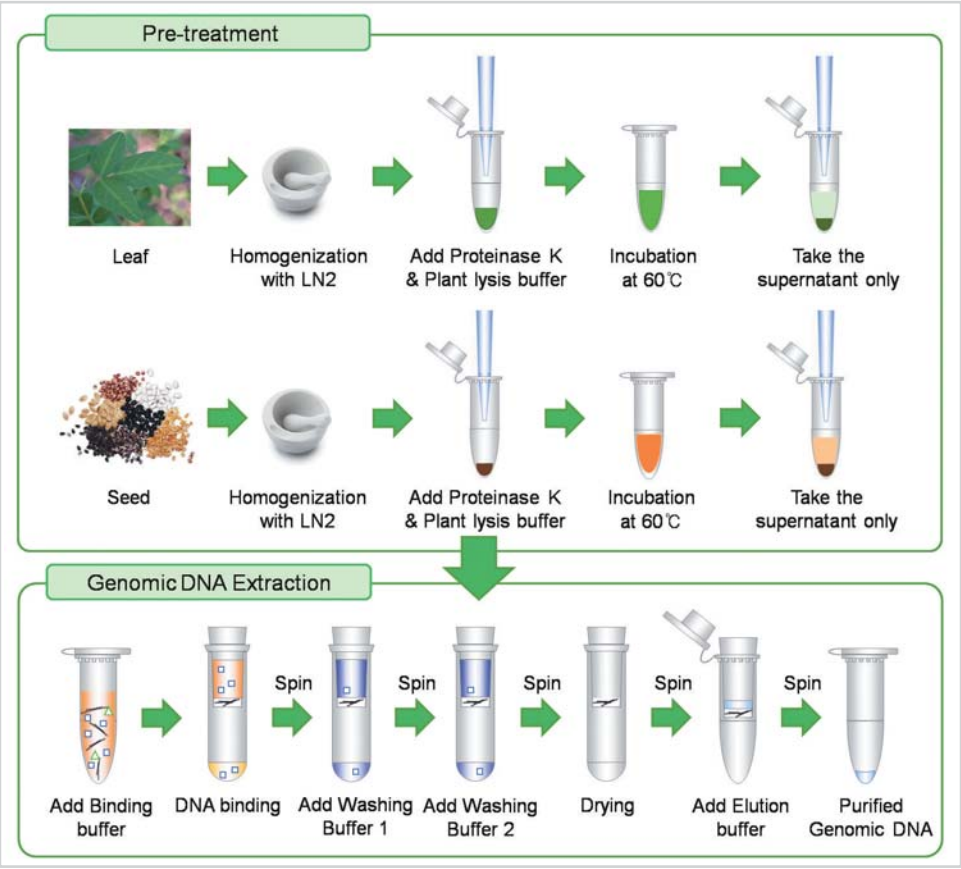
Application

Gene cloning, PCR, Quantitative Real-Time PCR, Southern blotting, SNP genotyping.

Example of DNA Extraction from Typical Samples

Sample	Amount	Yield
Soybean	100 mg	2 ~ 5 µg
Maize	100 mg	1 ~ 4 µg
Potato	100 mg	1 ~ 4 µg

Procedure



AccuPrep® GMO DNA Extraction Kit

■ Experimental Data

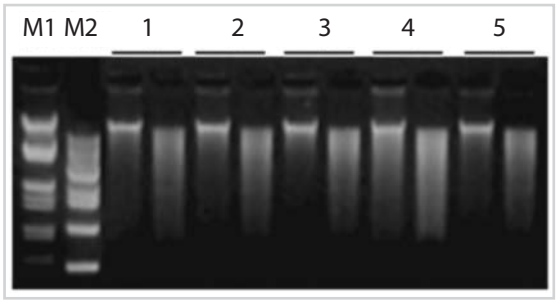


Figure 1. Genomic DNAs from soybean, tofu and maize.
Lane M1: Molecular weight marker, λ DNA/*Eco*R I + *Hin*d III Markers (D-1070, Bioneer),
Lane M2: Molecular weight marker, 1 kb ladder (D-1040, Bioneer)
Lane 1: Soybean (100 mg)
Lane 2: Tofu (100 mg)
Lane 3: Maize (100 mg)
Each lane consists of: 100 ng of intact DNA (left) and *Hin*d III (E-1721, Bioneer) enzyme-digested DNA (right).

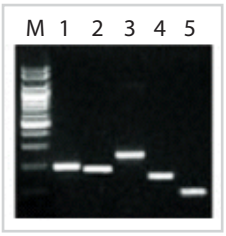


Figure 2. PCR results for GMO detection.
Lane M: Molecular Weight marker, 1 kb ladder (D-1040, Bioneer)
Lane 1-5: PCR results for GMO detection

■ Ordering Information

Cat. No.	Product Description
K-3031	*AccuPrep*® GMO DNA Extraction Kit, 100 reactions
KB-0111	Proteinase K powder, lyophilized (25 mg/tube X 2 tubes)
KA-0102	DNA Binding Column Tubes package (100 ea)

02
Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Genomic DNA Extraction Kit

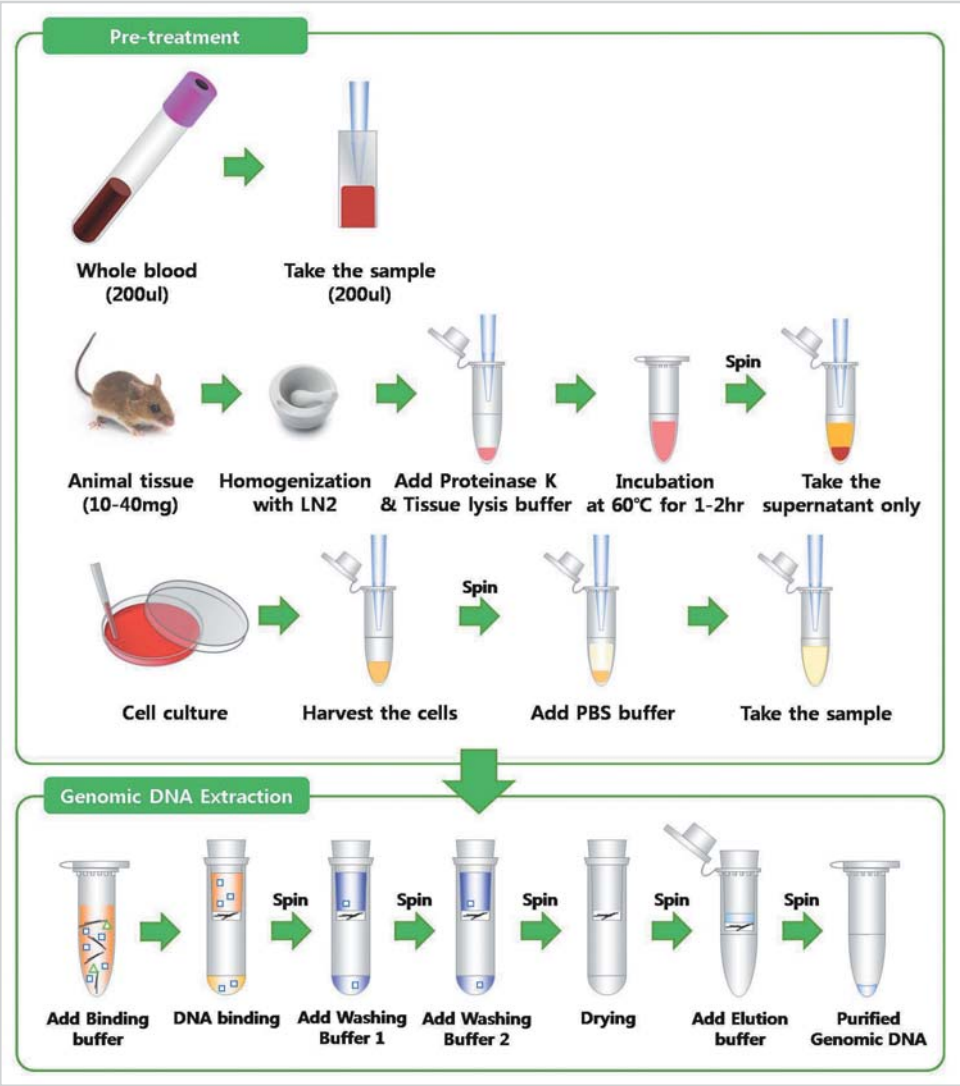
■ Description

AccuPrep® Genomic DNA Extraction Kit rapidly and conveniently extracts genomic DNA from blood, lymphocyte, buffy coat, tissue and cultured cell. This process does not require phenol/chloroform extraction, alcohol precipitation or other burdensome steps. Our Kit uses a spin column, bind-wash-elute method. Proteins and other contaminants which can inhibit enzyme reaction or PCR are eliminated through series of short wash-and-spin steps. The isolated DNA is ready to use in various molecular biology applications.

■ Features and Benefits

- Highly purified and high yield genomic DNA can be extracted from Whole blood, Animal tissue and Cultured cells.
- Silica based DNA binding column with high binding efficiency.
- Optimized Tissue lysis buffer for efficient lysis of the various tissue sample.

■ Procedure



AccuPrep® Genomic DNA Extraction Kit

■ Application

Gene cloning, PCR, Real-Time PCR, Southern blotting, SNP genotyping.

■ Specifications

Sample	Amount	Yield
Whole blood	200 µl	3 - 6 µg
Buffy coat	200 µl	15 - 20 µg
Cultured cells	10^4 ~ 10^8 cells	15 - 20 µg
Mammalian tissue	25 ~ 50 mg	10 - 15 µg

■ Experimental Data

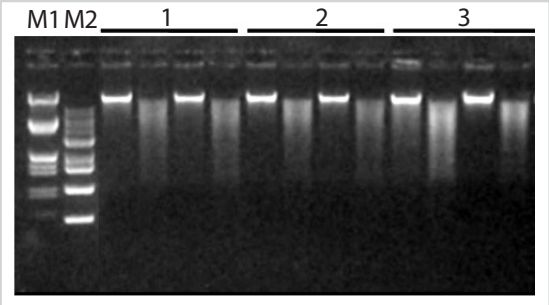


Figure 1. Gel electrophoresis of whole blood genomic DNA

Lane M1; Molecular weight marker, λ DNA/*Eco*R I + *Hin*d III Markers (Cat. No. D-1070, Bioneer), Lane M2; Molecular weight marker, 1 kb ladder (Cat. No. D-1040, Bioneer), Lane 1; whole blood genomic DNA of two individual mice, Lane 2; whole blood genomic DNA of two individual rats, Lane 3; whole blood genomic DNA of two people.

Each lane consists of: 100 ng of intact DNA (left) and *Hin*d III (E-1721, Bioneer) enzyme digested DNA (right)

■ Ordering Information

Cat. No.	Product Description
K-3032	*AccuPrep*® Genomic DNA Extraction Kit, 100 reactions
KB-0111	Proteinase K powder, lyophilized (25 mg/tube X 2 tubes)
KA-0112	DNA Binding Column Tubes package (100 ea)

02
Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Viral RNA Extraction Kit

Description

AccuPrep® Viral RNA Extraction Kit is designed for the rapid and convenient extraction of viral RNA from cell-free samples as serum, plasma, CSF, urine, etc. This Kit can be used for extracting RNA from a wide variety of RNA virus, such as HIV, HAV, HCV, and enteroviruses. The Kit is designed to process RNA using cell-free sources only – the presence of cells may cause gDNA contamination. The viral RNA extracted with the *AccuPrep*® Viral RNA Extraction Kit can be directly used as a template for RT or RT-PCR. The RNA extracted with that Kit has an average $A_{260/280}$ ratio greater than 1.8.

The *AccuPrep*® Viral RNA Extraction Kit conveniently extracts RNA in 20 minutes. In the presence of chaotropic salt, RNA is bound to glass fibers fixed in a column. Proteins and other contaminants are removed through the washing step, and the viral RNA is eluted in the final low-salt elution step.

The *AccuPrep*® Viral RNA Extraction Kit does not require the use of organic solvents or ethanol precipitation steps, and is thus ideal for the safe and convenient RNA extraction.

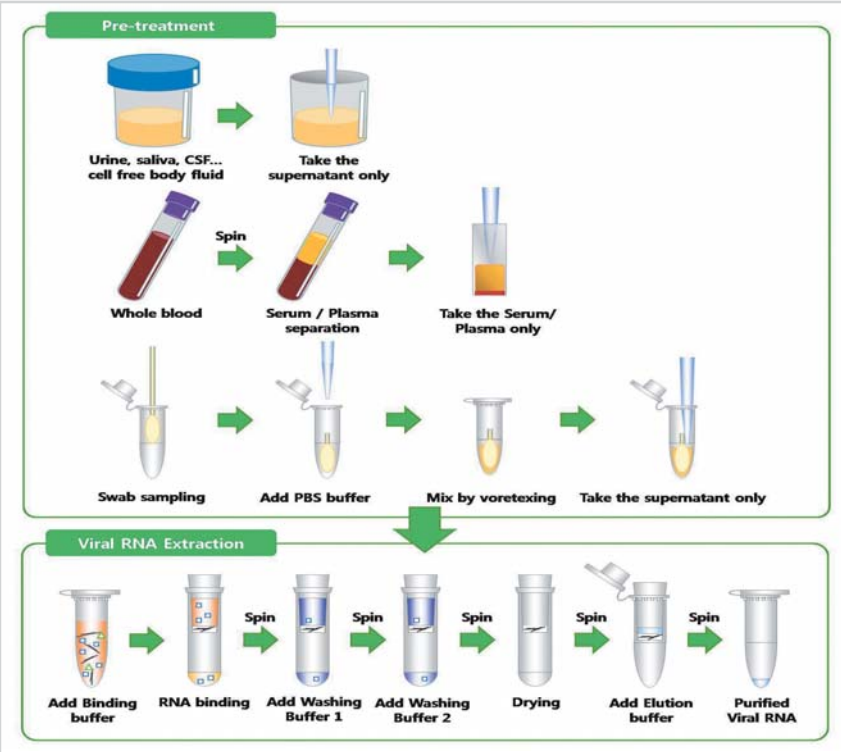
Features and Benefits

- Highly purified and high purity viral RNA can be extracted from various clinical samples (whole blood, CSF, urine, swab).
- Silica based RNA binding column with high RNA binding efficiency.
- Provided poly (A) can protect RNA degradation during the extraction steps and enhance the binding efficiency.

Application

cDNA synthesis, RT-PCR, Quantitative Real-Time RT-PCR, poly A+ RNA selection, Northern blot analysis, pathogen detection.

Procedure



Ordering Information

Cat. No.	Product Description
K-3033	*AccuPrep*® Viral RNA Extraction Kit, 100 reactions
KB-0121	Poly (A) powder, lyophilized (2 mg/tube)
KA-1111	RNA Binding Column Tubes package (100 ea)

AccuPrep® PCR Purification Kit

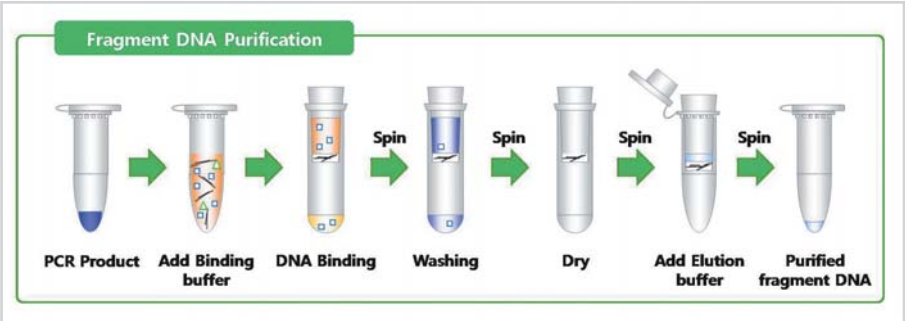
Description

AccuPrep® PCR Purification Kit is designed for the rapid purification of up to 10 µg of DNA fragments from PCR and other enzymatic reactions within 5 minutes. The size range for effective purification is 0.1 - 10 kb, thus 20 - 40 mer oligonucleotides used commonly in PCR are effectively removed. The recovery yield exceeds 70-90%. Elution volume can be as little as 30 µl when concentrated product is needed. Purified DNA fragment can be immediately used for subcloning, sequencing, and other molecular biological applications.

Features and Benefits

- Completely purify the fragment DNA from various enzymatic reaction products within 5 mins.
- Highly purified and high yield fragment DNA can be purified from various enzymatic reaction products (restriction enzyme digestion, A-tailing, labeling).
- Double strand and single strand DNA can be purified with high recovery.
- Usable range is 0.1 to 10 kb with 70 – 90 % recovery.
- Silica based DNA binding column with high binding efficiency.

Procedure



Experimental Data

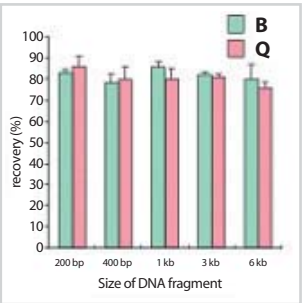


Figure 1. Typical recovery vs. competitor
The figure shows percentage recovery after purification of DNA amplified by PCR. The 70 - 90% of DNA was recovered regardless of DNA size (0.2 - 6.0 kb). B; *AccuPrep*® PCR Purification Kit (K-3034 & K-3034-1), Q; Competitor

Application

Sub-cloning, Sequencing, Labeling, DNA concentration, etc

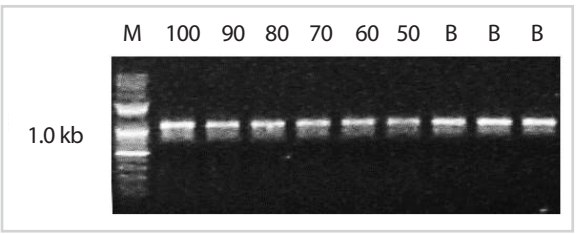


Figure 2. Recovery analysis of the purified PCR product
Lane M; Molecular weight marker, 100 bp Plus ladder (D-1035, Bioneer), Lane 100; 100%; Lane 90; 90%, Lane 80; 80%,Llane 70; 70%, Lane 60; 60%, Lane 50; 50%, Lane B; purified PCR product

Ordering Information

Cat. No.	Product Description
K-3034	*AccuPrep*® PCR Purification Kit, 200 reactions
K-3034-1	*AccuPrep*® PCR Purification Kit, 50 reactions
KA-0033-1	DNA Binding Column Tubes (50 ea X 4 box)

02 Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Gel Purification Kit

Description

AccuPrep® PCR Purification Kit is designed for the purification of up to 10 μg of DNA fragment from low-melting, TAE, TBE agarose gel fraction within 15 mins. Provided Gel binding buffer can extract the target DNA fragment from the agarose gel into the solution. The recovery efficiency exceeds 70-90% and Elution volume can be as little as 30 μl when concentrated product is needed.

Features and Benefits

- Completely purify DNA fragments from low-melting, TAE, TBE agarose gel fraction in 15 mins.
- Usable range is 0.1 to 10 kb with 70 – 90 % recovery.
- Silica-based DNA binding column with high binding efficiency.

Application

Sub-cloning, Sequencing, Labeling, DNA concentration, etc

Procedure

Experimental Data

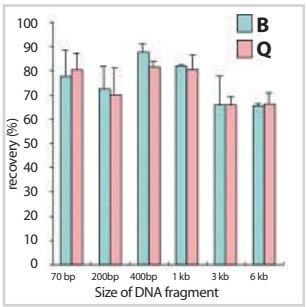


Figure 1. Typical recovery vs. competitor

Comparison between *AccuPrep*® Gel Purification Kit and competitor. This data shows the superior yield of *AccuPrep*® Gel Purification Kit as competing products.

B; *AccuPrep*® Gel Purification Kit (K-3035, K-3035-1), Q; competitor

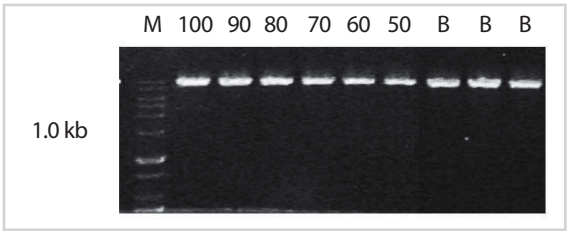


Figure 2. Recovery analysis of the purified fragment DNA

10.0 kb of plasmid DNA was purified from agarose gel after restriction enzyme digestion.

Lane M; Molecular weight marker, 100 bp Plus ladder (D-1035, Bioneer),), Lane 100; 100%; Lane 90; 90%, Lane 80; 80%,Llane 70; 70%, Lane 60; 60%, Lane 50; 50%, Lane B; *AccuPrep*® Gel Purification Kit (K-3035, K-3035-1)

Ordering Information

Cat. No.	Product Description
K-3035	*AccuPrep*® Gel Purification Kit, 200 reactions
K-3035-1	*AccuPrep*® Gel Purification Kit, 50 reactions
KA-0033-1	DNA Binding Column Tubes (50 ea X 4 box)

AccuPrep® Stool DNA Extraction Kit

■ Description

AccuPrep® Stool DNA Extraction Kit is designed for the rapid, convenient extraction of DNA from fresh or frozen stool or other samples containing large amounts of material that can inhibit PCR. Using the spin-column method, contaminants and enzyme inhibitors (such as heparin, bilirubin, bile salts, and porphyrin) are eliminated and high-purity DNA is obtained, ready for use in a variety of applications.

■ Features and Benefits

- Highly purified genomic DNA can be extracted from various type of stool samples with optimized Stool lysis buffer to remove the PCR inhibitory materials (heparin, bilirubin, etc).
- Silica based DNA binding column with high DNA binding efficiency.

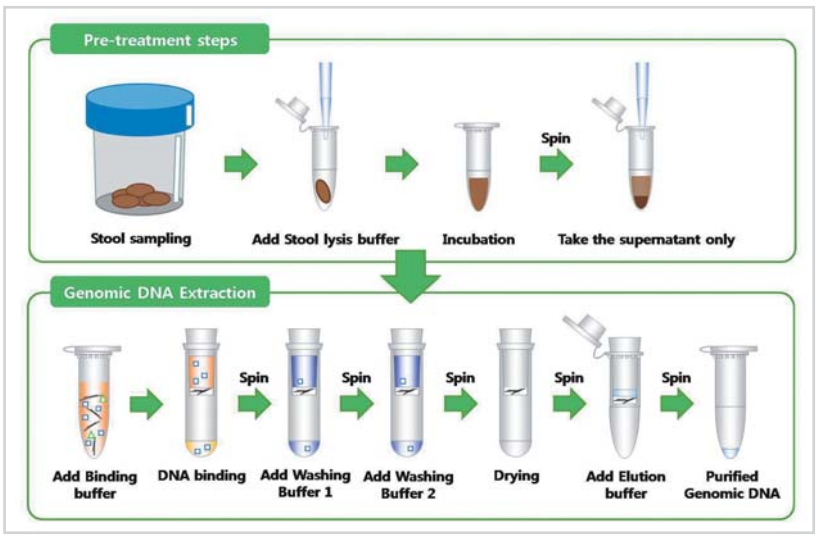
■ Application

PCR, Real-Time PCR, southern blotting, SNP genotyping, pathogen characterization, etc

■ Specifications

Sample	Amount	Yield
Stool	100 mg	2 ~ 5 μg

■ Procedure



■ Experimental Data

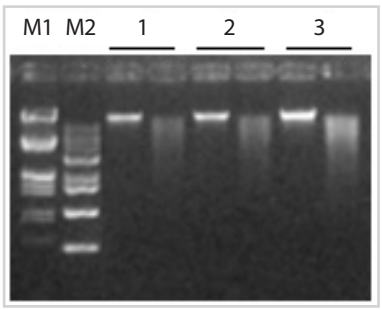


Figure 1. Gel electrophoresis of stool genomic DNA extracted by *AccuPrep*® Stool DNA Extraction Kit.

Lane M1: Molecular weight marker, λ DNA/*Eco*R I + *Hin*d III Markers (D-1070, Bioneer), Lane M2: Molecular weight marker, 1 kb DNA Ladder (D-1040, Bioneer), Lane 1-3: DNA purified with *AccuPrep*® Stool DNA Extraction Kit.

Each lane consists of: 100 ng of Intact DNA (left) and *Hin*d III (E-1721, Bioneer) enzyme digested DNA (right)

02 Spin column type manual Nucleic Acid Extraction Kits

AccuPrep® Stool DNA Extraction Kit

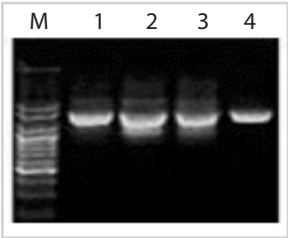


Figure 2. PCR results of H. pylori DNA extracted with *AccuPrep*® Stool DNA Extraction Kit.

Lane M: Molecular weight marker, 100 bp DNA ladder (D-1030, Bioneer), Lane 1-4: PCR results for H. pylori detection

■ Ordering Information

Cat. No.	Product Description
K-3036	*AccuPrep*® Stool DNA Extraction Kit, 100 reactions
KB-1141	Stool lysis buffer (50 ml)
KB-0111	Proteinase K powder, lyophilized (25 mg/tube X 2 tubes)
KA-0152	DNA Binding Column Tubes package (100 ea)

03

96-Well vacuum block type Nucleic Acid Extraction Kits

96-Well vacuum block type Nucleic Acid Extraction Kits

03
96-Well vacuum block type Nucleic Acid Extraction Kits

AccuPrep® Plasmid Mini Extraction Kit for 96 well vacuum block

■ Description

AccuPrep® 96 Plasmid Extraction Kit for the *BioVac*™ 96 Vacuum Manifold can simultaneously extract plasmid DNA from 96 different samples using a *BioVac*™ 96 vacuum manifold (A-9030, Bioneer). The extracted plasmid DNA can be directly used for restriction enzyme digestion, PCR, sequencing, transformation, and cloning, without having to undergo any additional purification steps. 96 samples can be purified without additional machinery such as a centrifuge. This product is also compatible with other company's vacuum manifold systems (QIAGEN, Promega and Axygen), as well as automation systems that are compatible with Kits from Qiagen and Promega.

■ Application

Sub-cloning, Sequencing, Transformation, Transfection, *In-vitro* transcription/ translation.

■ Features and Benefits

- 96-well binding plates with high binding efficiency.
- Endonuclease A denaturation buffer for the endA+ strains (Denaturation Buffer, DE Buffer).
- The 96 samples can be handled without additional instrumentation.
- Compatible with other vacuum manifold systems.

■ Specifications

Starting sample amount	1 ml ~ 10 ml
Elution volume	50 - 100 µl
Expected yield	Up to 10 µg
Preparation time	< 40 min

■ Ordering Information

Cat. No.	Product Description
K-3030-2	*AccuPrep*® Plasmid Mini Extraction Kit for 96 well vacuum block, 192 reactions

AccuPrep® Genomic DNA Extraction Kit for 96 well vacuum block

Description

AccuPrep® 96 Genomic DNA Extraction Kit for the *BioVac*™ 96 Vacuum Manifold has been designed to quickly and conveniently extract 96 genomic DNA samples simultaneously from whole blood, buffy coat, lymphocytes, plasma, serum, body fluids, and cultured cells. The 96 samples can be handled without additional machinery such as a centrifuge. The genomic DNA is simply extracted with a vacuum pump and *Biovac* 96 Vacuum Manifold. This product is also compatible with other company's vacuum manifold systems (QIAGEN, Promega and Axygen), as well as automation systems that are compatible with Kits from Qiagen and Promega.

Features and Benefits

- Highly purified genomic DNA with high yield can be extracted from whole blood, animal tissue, cultured cells.
- 96-well binding plates with high binding efficiency.
- Up to 96 samples can be handled without additional instruments.
- Also available to other company's vacuum manifold system.

Application

Gene cloning, PCR, Real-Time PCR, Southern blotting, SNP genotyping.

Specifications

Sample	Amount	Yield
Whole blood	200 µl	Up to 3 µg
Buffy coat	200 µl	Up to 10 µg
Cultured cells	10^4 ~ 10^8 cells	Up to 10 µg

Ordering Information

Cat. No.	Product Description
K-3032-2	*AccuPrep*® Genomic DNA Extraction Kit for 96 well vacuum block, 192 reactions

03
96-Well vacuum block type Nucleic Acid Extraction Kits

AccuPrep® PCR Purification Kit for 96 well vacuum block

■ Description

AccuPrep® 96 PCR Purification Kit for *BioVac*™ 96 Vacuum Manifold is a high-throughput PCR purification Kit that can purify PCR products and eliminate primers, enzymes, dNTPs, salts and buffer. By using the special Biovac 96 Vacuum Manifold developed by Bioneer, 96 separate PCR products can be simultaneously purified in 25 minutes. This product is also compatible with other company's vacuum manifold systems (QIAGEN, Promega and Axygen), as well as automation systems that are compatible with Kits from Qiagen and Promega.

■ Features and Benefits

- Highly purified DNA fragment with high yield can be purified from various enzymatic reaction products (restriction enzyme digestion, A-tailing, labeling, etc.).
- Double strand and single strand DNA can be purified with high recovery.
- Usable range is 0.1 to 10 kb with 70 – 90% recovery.
- 96-well binding plates with high binding efficiency.
- Up to 96 samples can be handled without additional instruments.
- Available to other company's vacuum manifold system.

■ Application

Sub-cloning, Sequencing, Labeling, DNA concentration, etc.

■ Ordering Information

Cat. No.	Product Description
K-3034-2	*AccuPrep*® PCR Purification Kit for 96 well vacuum block, 192 reactions

04 Solution type manual Nucleic Acid Extraction Kits

04 Solution type manual Nucleic Acid Extraction Kits

AccuZol™ Total RNA Extraction Solution

■ Description

AccuZol™ is a ready-to-use reagent for the isolation of total RNA from various sample materials. A monophasic solution of phenol and guanidine-salt eliminates RNase activity in order to maintain the RNA integrity during sample homogenization or lysis. *AccuZol*™ allows you to extract high-yield total RNA from small quantities of starting material.

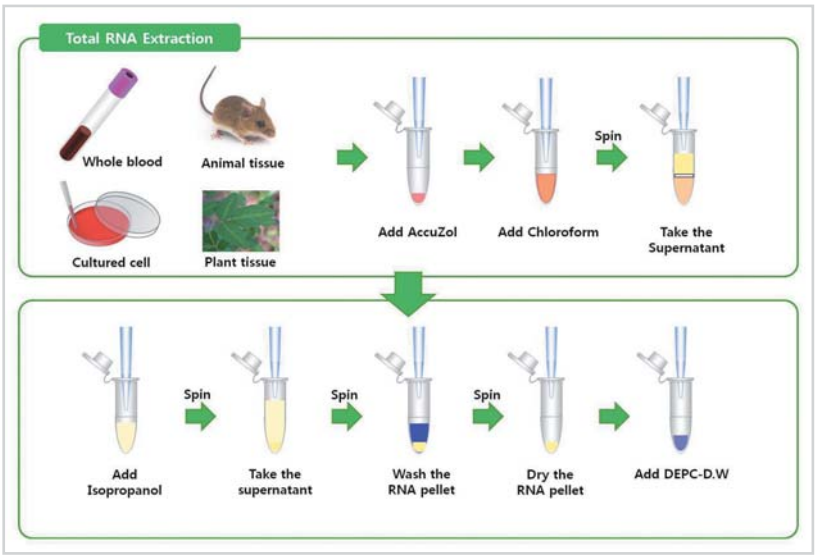
■ Features and Benefits

- **Simplicity**
  The steps requiring hazardous solutions have been minimized, safety is increased and contamination with RNase is eliminated. Genomic DNA contamination is minimal even without DNase treatment.
- **Experiment Time**
  The procedure for total RNA isolation can be completed in 1 hour.
- **Sample Source**
  Tissues and cultured cells originated from human, animals, plant, and bacteria, or blood samples.
- **Easy Phase Separation**
  Green colored reagent is useful to distinguish between organic phase and aqueous phase.

■ Application

cDNA synthesis, RT-PCR, Real-Time RT-PCR, Northern/dot blot analysis, RNase protection assays, Molecular cloning.

■ Procedure



AccuZol™ Total RNA Extraction Solution

■ Specifications

Sample type		Starting volume	Elution volume	Typical Yield (μg)
Animal Tissue	Liver	10 mg	50 μl	50 - 70
	Kidney			25 - 40
	Spleen			40 - 60
	Lung			15 - 25
	Brain			8 - 12
Cultured Cell	HeLa	1 x 10^6 cells	50 μl	15 - 30
	A549			15 - 25
	PC3			15 - 25
Bacterial Cell	*E.coli*	1 x 10^7 cells	50 μl	10 - 15
Plant Tissue	Bean leaf	100 mg	50 μl	30 - 50
Blood	Human whole blood	250 μl	50 μl	2 - 3

■ Experimental Data

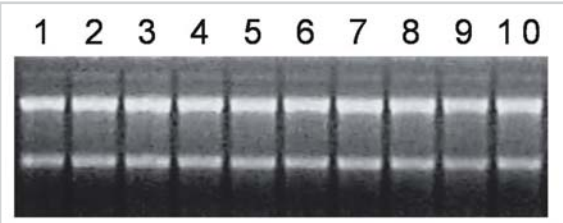


Figure 1. Electrophoresis Pattern of total RNA extracted from animal tissues by *AccuZol*™.
Total RNA was isolated from 10-20 mg of rat tissues, and 2 μg of total RNA was loaded per each lane on a 1 % denaturing agarose gel.

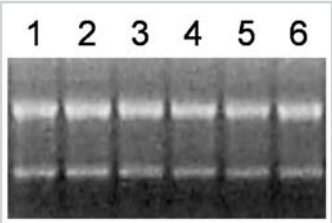


Figure 2. Electrophoresis Pattern of total RNA extracted from human cell lines by *AccuZol*™.
Total RNA was isolated from 1x10^6 cultured cells, and 1 μg of total RNA was loaded per lane on a 1 % denaturing agarose gel.

■ Ordering Information

Cat. No.	Product Description
K-3090	*AccuZol*™ Total RNA Extraction Reagent, 100 ml

04 Solution type manual Nucleic Acid Extraction Kits

DNA *PrepMate*™-II

Description

DNA *PrepMate*™-II uses a binding buffer and sillica matrix system under optimal conditions to effectively separate and purify DNA. The purified DNA can be used directly in applications such as PCR, restriction enzyme, labeling, cloning, and sequencing.

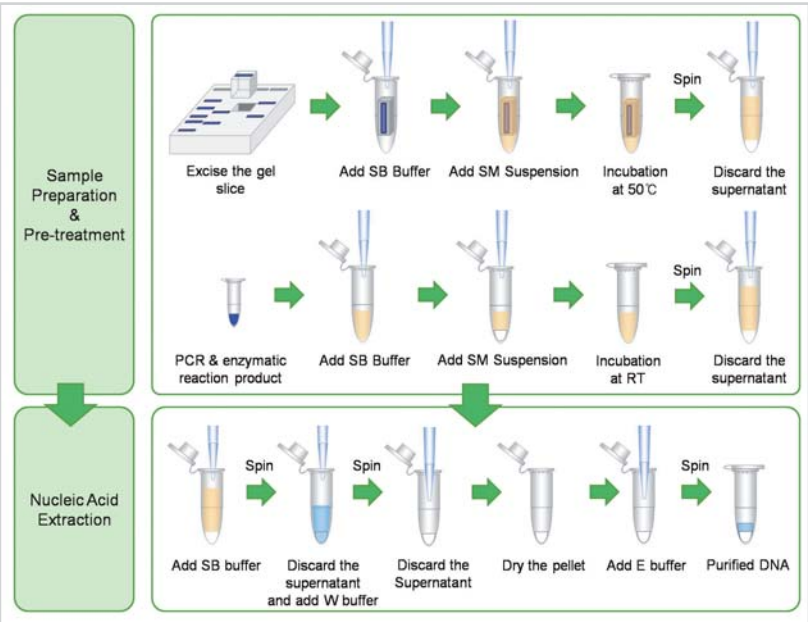
Application

PCR, restriction enzyme reaction, labeling, cloning, sequencing.

Features and Benefits

- **Experiment Time**
  15 min.(for PCR product purification),
  40 min.(for plasmid DNA extraction)
- **Sample source**
  Cultured bacterial cells, PCR products, Agarose gel fragments, Enzyme reaction mixtures, etc.

Procedure



Ordering Information

Cat. No.	Product Description
K-3011	DNA *PrepMate*™-II

DNA *PrepMate*™-M

Description

DNA *PrepMate*™-M is used to extract DNA from microorganisms with tough cell walls such as *M. tuberculosis* complex (*M. tuberculosis and M. bovis*) and Mycoplasma pneumoniae using a standard microwave oven. The reagents can be used for a variety of clinical samples such as sputum and pleural fluid.

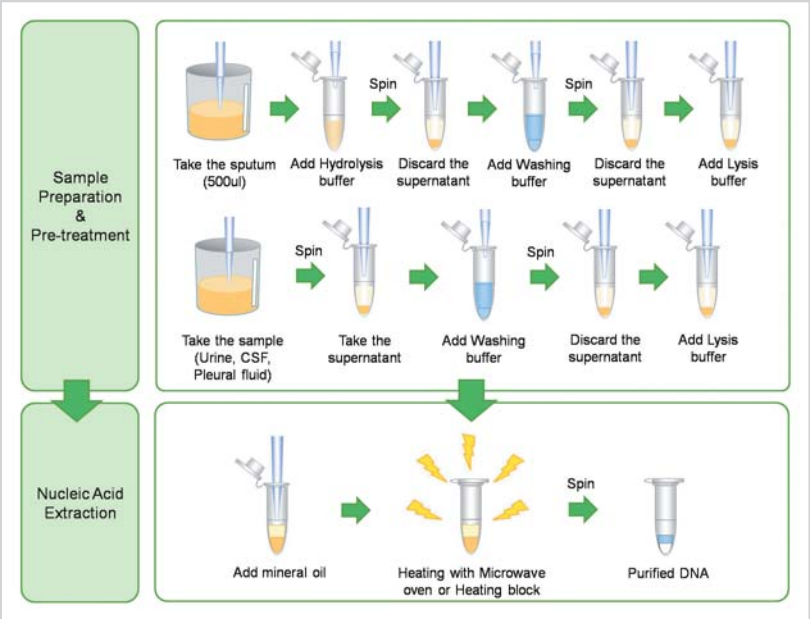
Features and Benefits

- **Advantages**
  DNA can be efficiently extracted from microorganisms with tough cell wall, such as Mycoplasma in clinical fluids. It is not necessary to treat the sample with harmful organic solvents.
- **Experiment Time**
  40 mins. (the case of sputum, CSF/Urine, pleural fluid)
- **Sample source**
  M. tuberculosis complex in Sputum, CSF/Urine, Pleural fluid, Tissue, Cultured cells.

Application

PCR, Quantitative Real-Time PCR.

Procedure



Ordering Information

Cat. No.	Product Description
K-3020	DNA *PrepMate*™-M

04 Solution type manual Nucleic Acid Extraction Kits

Viral RNA *PrepMate*™

Description

Viral RNA *PrepMate*™ can extract the total RNA from RNA viruses such as HCV using conventional guanidium salt lysis method. The extracted viral RNA can be used as a template of the RT-PCR or quantitative Real-Time RT-PCR for HCV, HIV detection.

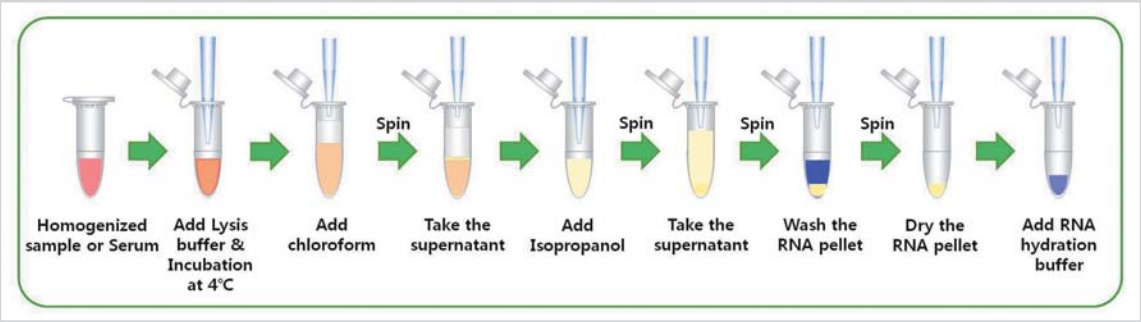
Features and Benefits

- **Advantages**
  The steps requiring hazardous solutions have been minimized, safety is increased and contamination with RNase is eliminated. Genomic DNA contamination is minimal even without DNase treatment.
- **Experiment time** : 40 mins. (in the case of serum) .
- **Sample source**
  RNA Virus (e.g. HCV) from Tissue, Serum, Cultured cell, Leucocyte .

Application

RT-PCR, Quantitative Real-Time RT-PCR, cDNA synthesis, etc.

Procedure



Ordering Information

Cat. No.	Product Description
K-3060	Viral RNA *PrepMate*™

Blood RNA *PrepMate*™

Description

Blood RNA *PrepMate*™ includes Blood Buffer for the extraction of total RNA from blood using the conventional guanidium salt-lysis method. This versatile Kit can extract total RNA not only from blood but also tissue, cultured cells, leucocytes, serum, etc., using suspension buffer and lysis buffer. The extracted RNA can be used as a template for RT-PCR, quantitative Real-Time RT-PCR, cDNA synthesis, cDNA library construction, Microarray, etc..

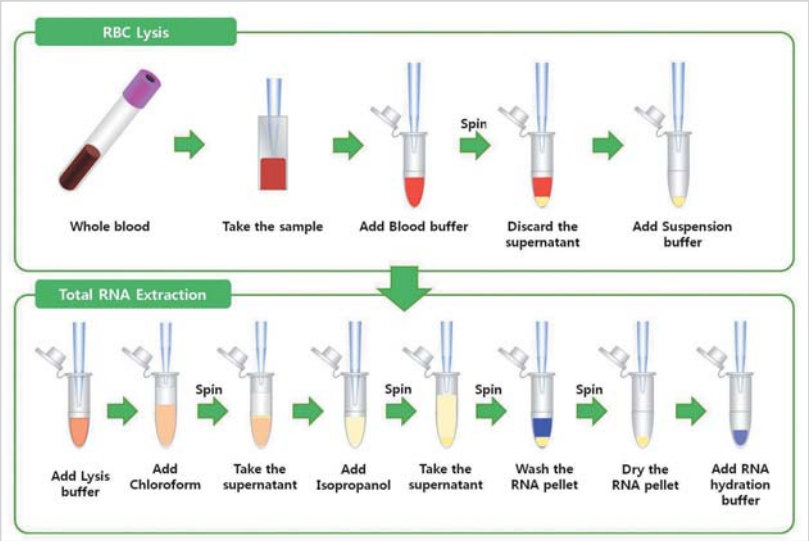
Features and Benefits

- As steps requiring hazardous solutions have been minimized, safety is increased and contamination with RNase is reduced. Genomic DNA contamination is minimal even without DNase treatment.

Application

RT-PCR, Quantitative Real-Time RT-PCR, cDNA synthesis, cDNA library, Microarray.

Procedure



Ordering Information

Cat. No.	Product Description
K-3070	Blood RNA *PrepMate*™

04 Solution type manual Nucleic Acid Extraction Kits

Tissue RNA *PrepMate*™

Description

Tissue RNA *PrepMate*™ uses a modified guanidium salt-lysis method to optimally extract total RNA from tissue. The amount of extracted total RNA can differ according to the tissue or cell type, so the starting amount should be adjusted to your needs. The extracted viral RNA can be used as a template for RT-PCR, quantitative Real-Time RT-PCR, cDNA synthesis, cDNA library construction, Microarray etc.

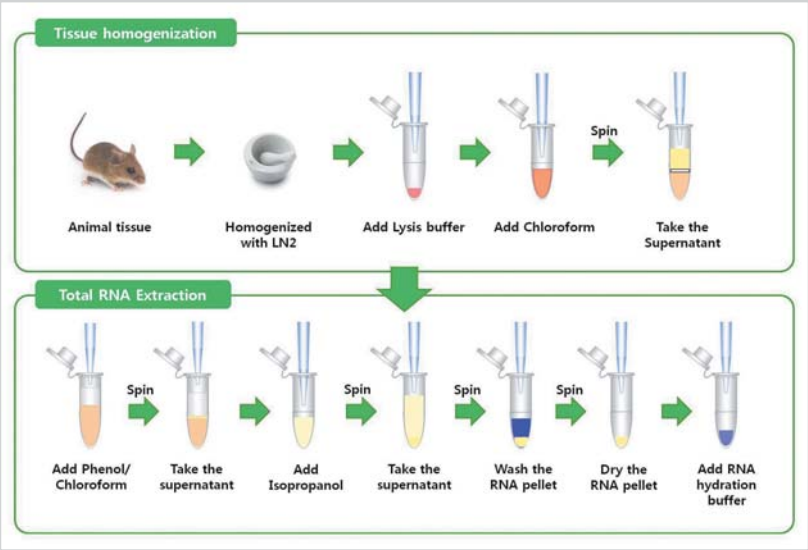
Features and Benefits

- It is extracted through the following steps; lysis, phenol:chloroform (5:1), and isopropanol precipitation. Genomic DNA contamination is minimal, even without DNase treatment. Total RNA is extracted quickly with high purity ($OD_{260/280}$ > 1.8).

Application

Northern/ dot blot analysis, poly A+ selection, RNase protection assay, RT-PCR, Real-Time RT-PCR, cloning.

Procedure



Ordering Information

Cat. No.	Product Description
K-3080	Tissue *PrepMate*™

05 Accessory

Accessory

05 Accessory

Tissue Homogenization Set

Description

Tissue homogenization set is designed for efficient homogenization of diverse animal tissue samples. This product includes a Tissue stick, a Tissue mixer and a Tissue filter tube.

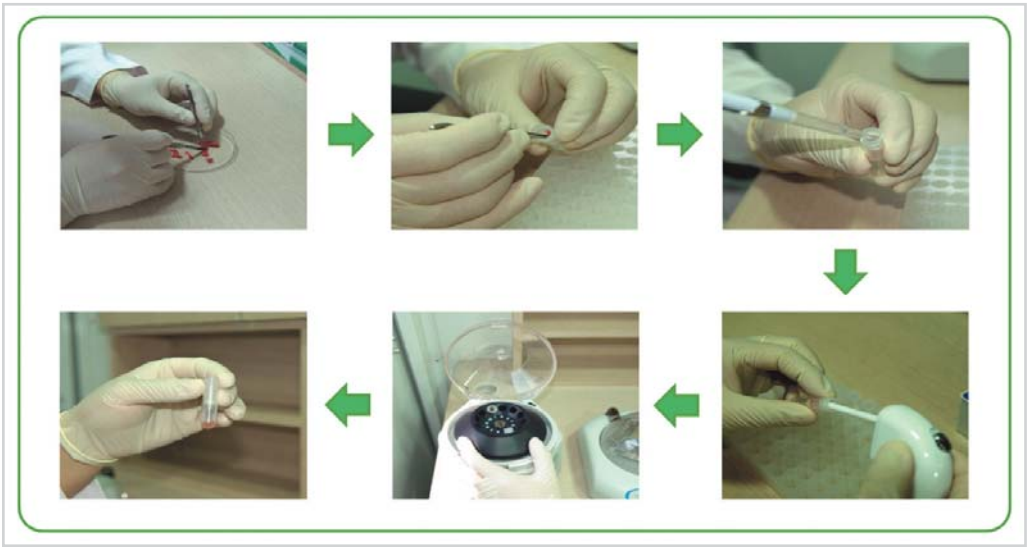
Features and Benefits

- Single use, No cross-contamination.
- Fibrous- sample (heart, skeletal muscle, etc…) can also be homogenized.

Contents

Components	Quantity	Note
Tissue Mixer	1 ea	
Tissue Stick	1 pack	100 ea/ pack
Tissue filter tube	2 box	50 ea/ box

Procedure



Ordering Information

Cat. No.	Product Description
KA-7030	Tissue Homogenization Set, 100 reactions
KA-7031	Tissue Stick, 100 ea
KA-7032	Tissue filter tube, 100 ea
KA-7033	Tissue Mixer