

User's Guide

***ExiPrep*<sup>™</sup> Plus  
Viral DNA/RNA Kit**

***ExiPrep*<sup>™</sup> Plus Viral DNA Kit (Cat. No.: K-4272)**  
***ExiPrep*<sup>™</sup> Plus Viral RNA Kit (Cat. No.: K-4273)**  
***ExiPrep*<sup>™</sup> Plus Viral DNA/RNA Kit (Cat. No.: K-4271)**

Please read all the information in booklet before using the unit



## **Safety Warnings and Precautions**

*ExiPrep™* Plus Viral DNA/ RNA Kit is developed and sold for research purposes only. It is not recommended for human or animal diagnostic use, unless cleared for such purposes by the appropriate regulatory authorities in the country of use. Wear appropriate protection when handling any irritant or harmful reagents. The use of a laboratory coat, protective gloves and safety goggles are highly recommended. For more information please consult the appropriate Material Safety Data Sheets (MSDS).

## **Warranty and Liability**

All BIONEER products undergo extensive Quality Control testing and validation. BIONEER guarantees quality during the warranty period as specified, when following the appropriate protocol as supplied with the product. It is the responsibility of the purchaser to determine the suitability of the product for its particular use. Liability is conditional upon the customer providing full details of the problem to BIONEER within 30 days.

## **Trademarks**

ExiPrep™ is a trademark of Bioneer Corporation.

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## I. Kit Components

	<i>ExiPrep™</i> Plus Viral DNA/ RNA Kit		
Cat. No.	Viral DNA (K-4272)	Viral RNA (K-4273)	Viral DNA/ RNA (K-4271)
<b>Buffer Cartridge ①</b>	6 ea	6 ea	6 ea
<b>Buffer Cartridge ②</b>	6 ea	6 ea	6 ea
<b>Disposable Filter Tip</b>	96 ea	96 ea	96 ea
<b>Elution Tube (8-strip)</b>	12 ea	12 ea	12 ea
<b>User's Guide</b>	1 ea	1 ea	1 ea

## II. Introduction

The *ExiPrep™* Plus Viral DNA/ RNA Kits are suitable to extract of viral DNA/ RNA from serum, plasma, CSF (Cerebrospinal fluid), BAL (Bronchoalveolar lavage), urine, swab and any cell free body fluid sample using automatic nucleic acid extractor, *ExiPrep™* 16 Plus.

## III. Storage

*ExiPrep™* Plus Viral DNA/ RNA Kits provide Buffer cartridge system. The Buffer cartridges contains binding buffer, washing buffer, elution buffer and magnetic bead solution for the nucleic acid extraction. Every Buffer cartridges were covered with sealing film to protect leakage, evaporation and cross contamination. The Buffer cartridges can be stored dry at room temperature (15°C–25°C) for up to 2 years without open.

*ExiPrep™* Plus Viral DNA/ RNA Kits provide lyophilized enzymes such as proteinase K and carrier RNA for the convenient use. Lyophilized proteinase K and carrier RNA are pre-loaded into Buffer cartridge①. It can be stored at room temperature (15°C–25°C) up to 2 years without any reduced activity.

Provided disposable tips, reaction tubes and elution tubes are DNase and RNase free, please give attention to the nuclease contamination during storing.

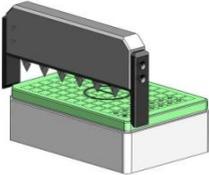
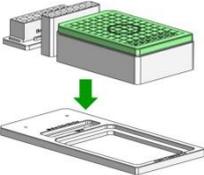
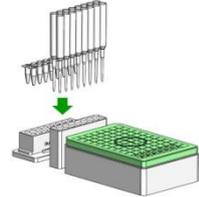
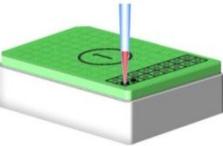
#### IV. Starting Volume

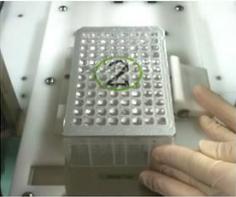
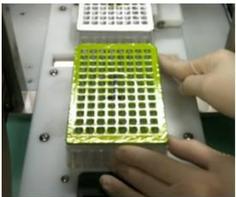
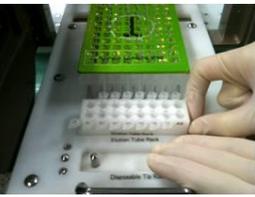
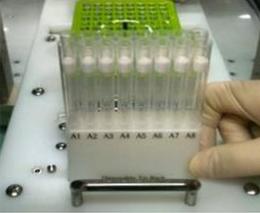
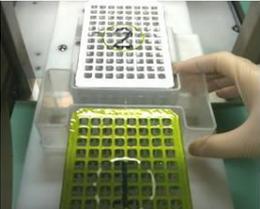
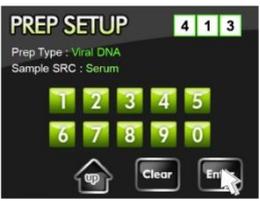
The amounts of starting volume and elution volumes are described in below.

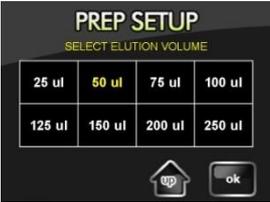
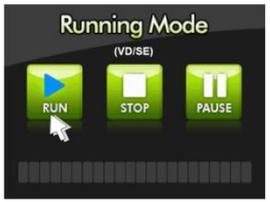
Sample type	Starting Volume	Elution Volume
Serum	200ul	50ul–100ul
Plasma	200ul	50ul–100ul
CSF	200ul	50ul–100ul
Urine	200ul	50ul–100ul
BAL	200ul	50ul–100ul
Cell free body fluid	200ul	50ul–100ul
Saliva	200ul	50ul–100ul
Swab	1 ea	50ul–100ul

#### V. Viral DNA/ RNA Extraction

This protocol is designed for extraction of Viral DNA/ RNA from blood, serum, plasma, CSF, urine, BAL and cell free body fluids

	<p>1. Make holes with the hole-punch tool to correspond with the sample numbers. Before punching the hole, shake the Buffer cartridge gently to settle down the bead and buffers.</p>
	<p>2. Place the Buffer Cartridge ①, Elution tube rack and Disposable tip rack on the setup tray.</p>
	<p>3. Load the Disposable filter tips and Elution tubes onto the racks. Ensure that all tips and tubes are aligned in desired position.</p>
	<p>4. Load 200ul of sample into the sample loading wells. Do not contaminate another well.</p>

	<p>5. Place the Buffer Cartridge ② onto the proper position of the base plate. Please check the punched holes of the Buffer Cartridge ②.</p>
	<p>6. Place the Buffer Cartridge ① onto the proper position of the base plate. Please check the punched holes of the Buffer Cartridge ①.</p>
	<p>7. Place the Elution tube rack onto the proper position of the base plate.</p>
	<p>8. Place the Disposable filter tip rack onto the proper position of the base plate.</p>
	<p>9. Place the Waste tray onto the proper position of the base plate between Buffer cartridge ① and Buffer cartridge ②. 10. Push the base plate back into the instrument and close the door.</p>
	<p>11. Turn on the <i>ExiPrep™</i> 16 Plus. 12. Press the 'Start' button to access the PREP SETUP menu.</p>
	<p>13. Insert a protocol number according to the protocol number list (Page 6, 7, 8) about nucleic acid types and sample sources. 14. Press the 'Enter' button to move to the next step.</p>

	<p>15. Select the elution volume from the touchscreen. 16. Press the 'ok' button to move to the next step.</p>
	<p>17. Verify the loaded every racks and buffer cartridges in the correct position on the base plate according to the 'CHECK LIST' like as followings.</p>
	<p>18. Verify the protocol name on the screen. 19. Press the 'Run' button to start an extraction run.</p>
	<p>20. After the completion of the Instrument's operation, take the Elution tube from base plate first. 21. Remove the every parts from the base plate and close the door.</p>

## VI. Troubleshooting

### Low yield of viral DNA/ RNA

Did you add sufficient amount of samples? The yield is dependent on the sample type and amount. Sometimes overload sample may decrease the yield.

Did you completely lyse the samples? Incomplete lysis decreases the yield and purity.

Did you shake your Buffer cartridge ① before use? Incomplete suspension of the magnetic bead may decrease the yield and purity.

### Co-eluted magnetic particle

Sometimes magnetic particle co-eluted with your viral DNA/ RNA after viral DNA/ RNA extraction. Co-eluted magnetic particle can not bind viral DNA and RNA in elution buffer and it will not decrease the yield and purity. Co-eluted magnetic particles can easily separate by simple centrifugation.

## VII. Protocol Number List

### 1. Viral DNA

No.	Target	Sample source
4 01	viral DNA	Whole blood
4 02	viral DNA	Animal tissue
4 12	viral DNA	Plasma
4 13	viral DNA	Serum
4 14	viral DNA	Buffy coat
4 15	viral DNA	Sputum
4 16	viral DNA	BAL
4 17	viral DNA	Saliva
4 18	viral DNA	Swab
4 19	viral DNA	Urine
4 20	viral DNA	Stool
4 21	viral DNA	Cell free body fluid
4 22	viral DNA	Pleural fluid
4 23	viral DNA	CSF
4 24	viral DNA	EPS
4 25	viral DNA	Respiratory sample
4 26	viral DNA	Amniotic fluid
4 27	viral DNA	Forensic sample
4 28	viral DNA	Bone marrow
4 29	viral DNA	Bone
4 30	viral DNA	Dried blood spot
4 31	viral DNA	Soil
4 32	viral DNA	Hair
4 33	viral DNA	Cell supernatant

## VII. Protocol Number List (continued)

### 2. Viral RNA

No.	Target	Sample source
5 01	viral RNA	Whole blood
5 02	viral RNA	Animal tissue
5 12	viral RNA	Plasma
5 13	viral RNA	Serum
5 14	viral RNA	Buffy coat
5 15	viral RNA	Sputum
5 16	viral RNA	BAL
5 17	viral RNA	Saliva

5	18	viral RNA	Swab
5	19	viral RNA	Urine
5	20	viral RNA	Stool
5	21	viral RNA	Cell free body fluid
5	22	viral RNA	Pleural fluid
5	23	viral RNA	CSF
5	24	viral RNA	EPS
5	25	viral RNA	Respiratory sample
5	26	viral RNA	Amniotic fluid
5	27	viral RNA	Forensic sample
5	28	viral RNA	Bone marrow
5	29	viral RNA	Bone
5	30	viral RNA	Dried blood spot
5	31	viral RNA	Soil
5	32	viral RNA	Hair
5	33	viral RNA	Cell supernatant

## VII. Protocol Number List (continued)

### 3. Viral DNA/RNA

No.	Target	Sample source	
6	01	viral DNA/ RNA	Whole blood
6	02	viral DNA/ RNA	Animal tissue
6	12	viral DNA/ RNA	Plasma
6	13	viral DNA/ RNA	Serum
6	14	viral DNA/ RNA	Buffy coat
6	15	viral DNA/ RNA	Sputum
6	16	viral DNA/ RNA	BAL
6	17	viral DNA/ RNA	Saliva
6	18	viral DNA/ RNA	Swab
6	19	viral DNA/ RNA	Urine
6	20	viral DNA/ RNA	Stool
6	21	viral DNA/ RNA	Cell free body fluid
6	22	viral DNA/ RNA	Pleural fluid
6	23	viral DNA/ RNA	CSF
6	24	viral DNA/ RNA	EPS
6	25	viral DNA/ RNA	Respiratory sample
6	26	viral DNA/ RNA	Amniotic fluid
6	27	viral DNA/ RNA	Forensic sample
6	28	viral DNA/ RNA	Bone marrow

6	29	viral DNA/ RNA	Bone
6	30	viral DNA/ RNA	Dried blood spot
6	31	viral DNA/ RNA	Soil
6	32	viral DNA/ RNA	Hair
6	33	viral DNA/ RNA	Cell supernatant

## VIII. Ordering Information

Product	Size	Cat. No.
<i>ExiPrep</i> <sup>™</sup> 16 Plus	1 ea	A-5030
<i>ExiPrep</i> <sup>™</sup> Plus Blood Genomic DNA Kit	96 prep.	K-4211
<i>ExiPrep</i> <sup>™</sup> Plus Tissue Genomic DNA Kit	96 prep.	K-4212
<i>ExiPrep</i> <sup>™</sup> Plus Cell Genomic DNA Kit	96 prep.	K-4213
<i>ExiPrep</i> <sup>™</sup> Plus Bacteria Genomic DNA Kit	96 prep.	K-4214
<i>ExiPrep</i> <sup>™</sup> Plus Plant Genomic DNA Kit	96 prep.	K-4215
<i>ExiPrep</i> <sup>™</sup> Plus Blood Total RNA Kit	Not available	
<i>ExiPrep</i> <sup>™</sup> Plus Tissue Total RNA Kit	96 prep.	K-4242
<i>ExiPrep</i> <sup>™</sup> Plus Cell Total RNA Kit	96 prep.	K-4243
<i>ExiPrep</i> <sup>™</sup> Plus Bacteria Total RNA Kit	Not available	
<i>ExiPrep</i> <sup>™</sup> Plus Plant Total RNA Kit	96 prep.	K-4244
<i>ExiPrep</i> <sup>™</sup> Plus Viral DNA Kit	96 prep.	K-4272
<i>ExiPrep</i> <sup>™</sup> Plus Viral RNA Kit	96 prep.	K-4273
<i>ExiPrep</i> <sup>™</sup> Plus Viral DNA/ RNA Kit	96 prep.	K-4271
<i>ExiPrep</i> <sup>™</sup> Plus Beef Genomic DNA Kit	96 prep.	K-4216
<i>ExiPrep</i> <sup>™</sup> Plus Rice Genomic DNA Kit	96 prep.	K-4217

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