財桂生物股份有限公司
Katsura Biological Corp.

Viral DNA/RNA Universal Kit (64)

(for use with the M32 Nucleic Acid Extractor)

CE IVD

REF **310211**

Σ 64 assays

A. Intended Use

The **Viral DNA/RNA Universal Kit** uses magnetic bead technology for rapid and reliable extraction of high-quality DNA and RNA from **plasma, serum, and other liquid samples**.

The product is intended to be used by professional users, such as technicians and physicians, that are trained in molecular biological techniques, and it is intended for in vitro diagnostic use.

B. Principles of the Procedure

The Viral DNA/RNA Universal Kit procedure comprises 4 steps (lyse, bind, wash, elute) and is carried out fully automated, using pre-filled 96-well extraction plates on the M32 Nucleic Acid Extractor. The procedure is designed to eliminate the potential for sample-to-sample cross-contamination and allows safe handling of potentially infectious samples.

Sample input volume is 200 µl, and elution volume is 100 µl.

Purified nucleic acids can be used for downstream applications such as real-time PCR, next generation sequencing etc.

C. Storage Conditions

The Viral DNA/RNA Universal Kit is stable at room temperature (15°C to 25°C), and it can be stored until the expiration date printed on the box label.

D. Kit Components

Item	Qty.	
Extraction Plate	4	96-well extraction plate with magnetic beads and buffers
Carrier RNA	1	Tube with 1 mg of lyophilized Carrier RNA
8-rod comb	8	8-channel strip for use with the M32 Extractor
Package Insert	1	Instructions for use for operator

Extraction Plate Contents

Column No.	Buffer	Volume
1 / 7	Lysis Buffer JS-8	650 µl
2 / 8	Wash Buffer W1B	700 µl
3 / 9	Wash Buffer W2B	800 µl
5 / 11	Magnetic Beads in Buffer MB	800 µl
6 / 12	Elution Buffer EL1	100 µl

E. Limitations and General Precautions

- This product is intended for use by trained personnel only.
- Wear disposable gloves, laboratory coat and eye protection when handling samples and reagents. Wash hands thoroughly thereafter.
- Process all samples on clean bench or in biosafety cabinet.
- The kit is used for Viral DNA and RNA isolation; therefore, use sterile pipette tips with filters or autoclaved tips tubes. Replace the tip for every process step.
- Magnetic beads may occasionally appear in the elution buffer. If so, please avoid the magnetic beads while transferring the extracted product.
- The M32 Nucleic Acid Extractor should be disinfected using 70% Ethanol, followed by UV light, before and after an extraction procedure.
- Do not use the kit after its expiration date.
- Elution buffer has been pre-filled in the extraction plate. Users should expect up to 20% loss from the initial volume due to evaporation by elution heating in the extraction process.

F. Nucleic Acid Extraction Procedure

IMPORTANT NOTE:

There is a **standard protocol** for the Viral DNA/RNA Universal Kit pre-installed on the **M32 Nucleic Acid Extractor**. The protocol details are listed in Section F.

If you intend to use different parameters, i.e. different sample input volumes, please refer to the M32 Nucleic Acid Extractor User Manual to create a customized protocol.

- Add 800 µl of nuclease-free water to the tube with Carrier RNA. (Note: store unused volume of dissolved Carrier RNA at -20°C.)
- Invert the extraction plate several times to re-suspend the magnetic beads. Gently swirl the plate to gather the solution to the bottom of the wells, or spin down the plate at 500rpm for 1 min.
- Carefully remove the aluminum foil, take care to avoid spillage.
- Transfer **200 µl of plasma or serum to columns 1 and 7** of the extraction plate. One sample = one well *(see Diagram 1 for details)*.

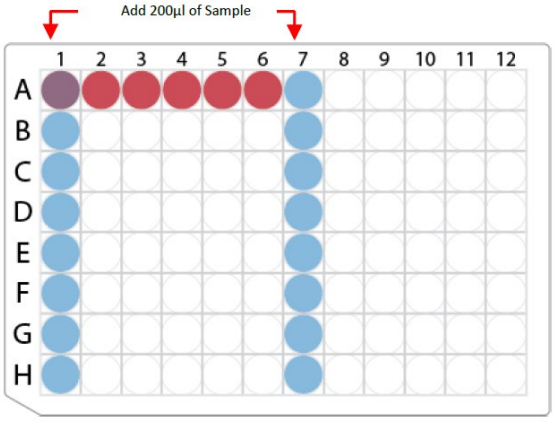

Diagram 1: Sample input configuration. Each sample requires 6 wells for extraction (shown in red). Each plate can extract up to 16 samples (shown in blue), and the M32 Nucleic Acid Extractor can process 2 plates per run.

- Add 20 µl of Carrier RNA to each sample in columns 1 and 7.
- Assemble two (or four) 8-rod combs to the mixing rack frame. Two 8-rod combs are required for each extraction plate, regardless of the number of samples to be extracted in each run.
- Pull out the plate tray and place the extraction plate(s) in the designated area(s). Align the cut corner (row H1) of the plate to the bottom left side of the plate tray. Push the tray completely back into the instrument until it snaps in.
- Close the door of the instrument.
- Select the program **<2 – V-UNI>** on the Protocol Selection screen. The protocol details are listed in Section F.
- Start the extraction run.
- After completion of the run remove the extraction plate(s) from the instrument.
- Carefully transfer the **extracted nucleic acid**, located **in columns 6 and 12** of the extraction plate, into nuclease-free microcentrifuge tubes *(see Diagram 2 for details)*.

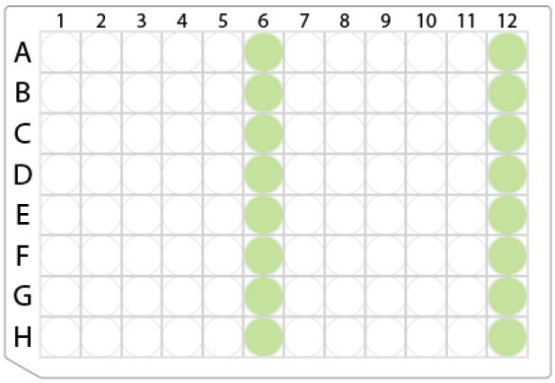

Diagram 2: Extracted Nucleic Acid. The Nucleic Acid Eluates are located in columns 6 and 12 of the extraction plate (shown in green).
Store the eluates at -20°C in a NON-frost-free freezer, to avoid freeze-thaw cycles that may cause sample degradation.

F. Extraction Protocol

Protocol Name: 2 – **V-UNI**						Instrument: **M32 Nucleic Acid Extractor**			
RUN	Well No	Name	Standby	Mix 1 – 30 Min	Volume	Mix Speed	Mag 0 – 120 Sec	Temp °C	Pause
V	1	Lysis	0	10	870	3	0	50	
V	5	Transfer	0	1	800	3	30	50	
V	1	Binding	0	5	800	3	30	50	
V	2	Wash1	0	1	700	3	30		
V	3	Wash2	0	1	800	3	30		
V	6	Elution	10	5	100	3	60	80	
V	5	Release Bead	0	1	600	3	0		

Danger!
Contains Guanidine thiocyanate
Contains Guanidine hydrochloride

H332: Harmful if inhaled.
H312: Harmful in contact with skin.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H412: Harmful to aquatic life with long lasting effect.

P260: Do not breathe mist/vapors/spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/ face protection.

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