# FavorPrep™
# Viral Nucleic Acid Extraction Kit II

# User Manual

**Cat. No.: FAVNK 002 (50 Preps)**
**FAVNK 002-1 (100 Preps)**

**For Research Use Only**

v.0910

# Introduction

The Viral Nucleic Acid Extraction Kit isdesigned for purification of total RNA or DNA from cell-free samples, such as plasma, serum, urine, cell-culture, supernatant, or cell-free body fluid . The method utilises detergents and a chaotropic salt to lyse virus, then the nucleic acid in chaotropic salt is bound to the glass fiver matrix of column. After washing off the contaminants, the purfied nucleic acid is eluted by RNase-free water. The detection limit for certain viruses depends on the sensitivity of individual PCR or RT-PCR assay. This protocol is recommended for parallel purification of viral RNA including HCV, HIV, and HTLV and viral DNA including HBV and CMV. Extracted DNA can be used directly for PCR amplification, RNA for RT-PCR amplification. The entire procedure can be completed in 20 minutes. This kit specially is for low viral load specimen.

# Kit Contents

| Cat. No. / preps | FAVNK002 (50 preps) | FAVNK002-1 (100 preps) |
|---|---|---|
| AD Buffer$^{+}$ (concentrated) | 4 ml | 8 ml |
| VNE Buffer | 30 ml | 60 ml |
| Wash Buffer 1* (concentrated) | 22 m | 44 ml |
| Wash Buffer 2** (concentrated) | 20 ml | 20 ml X 2 |
| RNase-free Water | 6 ml | 12 ml |
| VNE Column | 50 pcs | 100 pcs |
| Collection Tube | 100 pcs | 200 pcs |
| Elution Tube | 50 pcs | 100 pcs |
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$^{+}$Add 30 ml/ 60 ml of ethanol (96~100%) to AD Buffer when first open.

*Add 8 ml/ 16ml of ethanol (96~100%) to Wash Buffer 1 when first open.

**Add 80 ml of ethanol (96~100%) to Wash Buffer 2 when first open.

# Specification

**Sample Source: Serum, Plasma, Cell-Culture Supernatants, Cell-Free Body Fluids**

**Sample Size: 200 µl**

**Operation time: < 20 min**

# Important Notes

1. **Make sure everything is RNase-free when handling this system.**

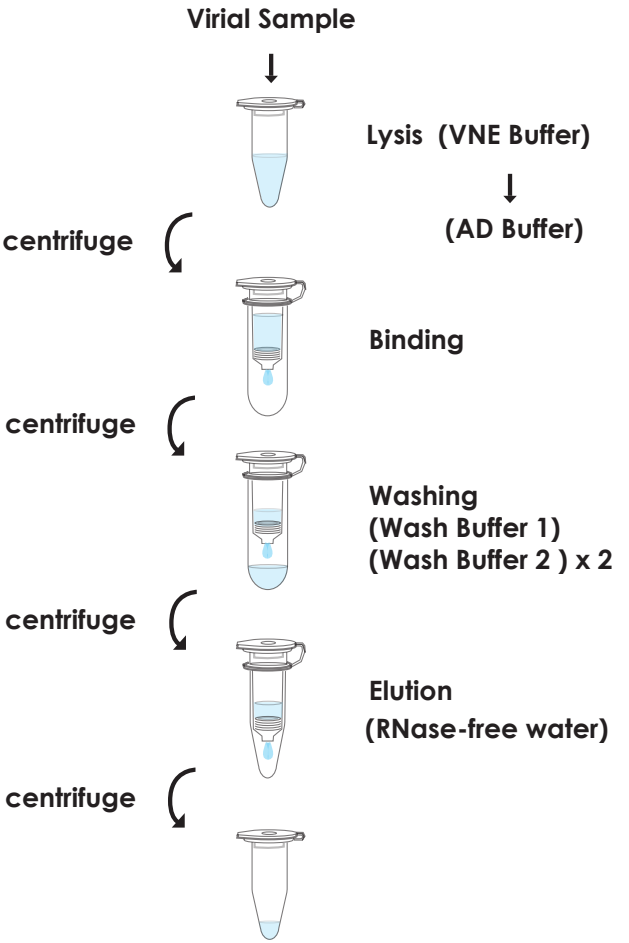
2. **Buffers provided in this system contain irritants. Wear gloves and lab coat when handling these buffers.**

3. **For FAVNK002, add 30 ml of ethanol (96-100%) to AD Buffer when first open. For FAVNK002-1, add 60 ml of ethanol (96-100%) to AD Buffer when first open.**

4. **For FAVNK002, add 8 ml of ethanol (96-100%) to Wash Buffer 1 when first open. For FAVNK002-1, add 16 ml ethanol (96-100%) to Wash Buffer 1 when first open.**

4. **Add 80 ml of ethanol (96-100%) to each Wash Buffer 2 when first open.**

# Brief Procedure



# General Protocol:

## Please Read Important Notes Before Starting Following Steps.

1. **Transfer 200 µl of sample (serum, plasma, body fluids and the supernatant of viral infected cell culture) into a microcentrifuge tube (not provided).**
   --If prepared sample is less than 200 µl , adjust sample volume to 200µl with PBS (not provided).

2. **Add 500 µl of VNE Buffer to the sample, mix well by vortexing. Incubate the sample mixture at room temperature for 10 minutes.**

3. **Add 550 µl of AD Buffer (ethanol added) to the sample mixture and mix well immediately by plus-vortexing.**
   --Make sure that ethanol has been added into AD Buffer when first open.

4. **Combine a VNE column with a 2 ml Collection tube.**

5. **Transfer up to 750 µl of sample mixture to the VNE column.**
   **Centrifuge at 8,000 x g for 1 minute then discard the flow-through.**
   **Combine the VNE Column with the used Collection Tube.**

6. **Transfer the rest of sample mixture to the VNE Column.**
   **Centrifuge at 8,000 x g for 1 min then discard the flow-through and the Collection Tube.**
   **Combine the VNE Column with a new Collection Tube (provided).**

7. **Add 500 µl of Wash Buffer 1 (ethanol added) to the VNE Column, centrifuge at 8,000 x g for 1 min then discard the flow-through.**
   **Combine the VNE Column with the used Collection Tube.**
   --Make sure that ethanol (96~100%) has been added into Wash Buffer 1 when first open.

8. **Add 750 µl of Wash Buffer 2 (ethanol added) to VNE Column, centrifuge at 8,000 x g for 1 min then discard the flow-through.**
   **Combine the VNE Column with the used Collection Tube.**
   --Make sure that ethanol (96~100%) has been added into Wash Buffer 2 when first open.

**9. Repeat step 7. Add 750 µl of Wash Buffer 2 (ethanol added) to VNE Column, centrifuge at 8,000 x g for 1 min then discard the flow-through. Combine the VNE Column with the used Collection Tube.**

**10. Centrifuge at full speed 13,000 X g for an additional 3 min to dry the VNE column.**
**Discard the flow-through and the Collection Tube.**
**--Important step!** This step will avoid the residual liquid to inhibit the subsequent enzymatic reactions.

**11. Combine the VNE Column with a Elution Tube (provided).**
**Add 50 µl of RNase-free Water onto the membrane center of the VNE Column. Stand VNE Column for 2 min.**
**--Important step!** For effective elution, make sure that the RNase-free Water is dispensed onto the membrane center and is absorbed completely.

**12. Centrifuge for 2 min to elute the nucleic acid.**

**13. Store nucleic acid at -70 °C.**