TIANLONG

# Animal Virus DNA and RNA Extraction Kit

# User Guide

Version 4.0

Σ 64 T070H

Σ 40 T071H

Σ 20 T072H

Σ 32 T073H

Σ 20 T074H

For use with Automatic nucleic acid extractor compatible with
Animal Virus DNA and RNA Extraction Kit

REF T070H T071H T072H T073H T074H

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**IFU_T070H/T071H/T072H/T073H/T074H_EN /Jan. 2024**

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## Intended Use

The ***Animal Virus DNA and RNA Extraction Kit*** is designed to rapidly extract viral DNA and RNA from Nasopharyngeal Swab, Environmental Samples, Serum Samples or Blood swab Samples and Tissue Samples. The extracted viral DNA and RNA are of high purity and stability, and can be used in a variety of routine operations, including enzyme digestion, Polymerase Chain Reaction (PCR), DNA library constructions, Southern hybridization and blotting and other experiments.

The ***Animal Virus DNA and RNA Extraction Kit*** is intended to be used by professionals, such as biotechnologists, microbiologists, clinical technicians, and physicians who are trained in molecular and biological techniques.

## Product Performance Indicators

The ***Animal Virus DNA and RNA Extraction Kit*** can extract more than 100 copies/mL viral DNA nucleic acid, and more than 100 copies/mL viral RNA nucleic acid. Both the intra and inter-batch variations of the kit are less than 5%.

## Special Notes

The ***Animal Virus DNA and RNA Extraction Kit*** is worked with TIANLONG® automatic nucleic acid extractors (Libex, GeneRotex 96 and PANA 9600S) that have been disinfected by UV light before use. After an experiment, wipe the inside of the extractor with 75% ethanol and disinfect it with UV light for 15 mins. An automatic nucleic acid extractor automates the entire purification process and can process 1-96 samples in a single run.

The kit is used to extract viral DNA and RNA targets. To avoid RNA degradation by RNase during operation, use exclusive-use utensils and sample injectors, and use disposable centrifuge tubes and tips processed by autoclave before using. The operator should wear powder-free gloves and a mask and a protective cover all.

The kit has magnetic beads with a unique separation function and a unique buffer system to extract, isolate and purify high-quality nucleic acids from a variety of liquid samples such as Nasopharyngeal Swab and Environmental Samples.

Magnetic beads enable the purification of high-quality nucleic acids that are free of protein, nuclease, and other impurities. Purified nucleic acids can be widely used in a variety of routine operations, including downstream experiments such as enzyme digestion, Polymerase Chain Reaction (PCR), DNA library construction, and Southern hybridization and blotting.

Please carefully read the manual of instructions before attempting to install or use the product for the first time. To consider all possible consequences of incorrect operation or non-recommended functions, pay special attention to the possible consequences.

## Testing Principle

The ***Animal Virus DNA and RNA Extraction Kit*** is worked with TIANLONG® automatic nucleic acid extractors (Libex, GeneRotex 96 and PANA 9600S). During the nucleic acid extraction process, magnetic beads are adsorbed, transferred and released using special magnetic rods based on the principle of magnetic bead adsorption. The extraction process enables the conduction of nucleic acid extraction and final adsorption of highly pure nucleic acids with the transfer of magnetic beads and nucleic acids.

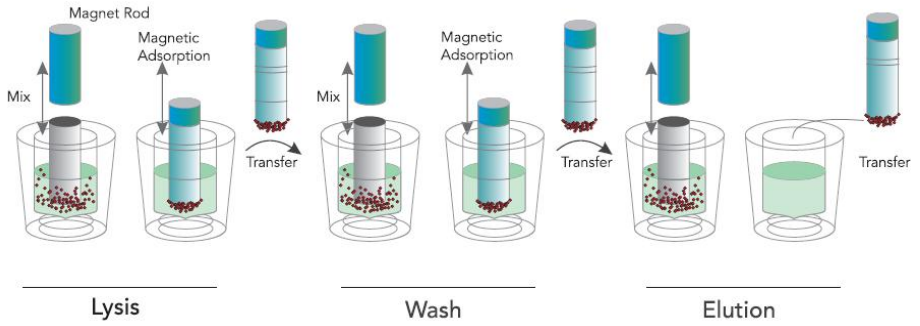


Figure 1. Schematic Diagram of Full-Automatic Nucleic Acid Extractor

**An automatic nucleic acid extractor performs the following steps on a sample containing magnetic particles:**

A magnetic rod protected by the mixing sleeve inserts into a well which contains sample. The mixing sleeve stirs rapidly and repeatedly in the liquid to ensure complete mixing of the liquid and magnetic beads. After cell lysis, nucleic acid adsorption, washing and elution, highly pure nucleic acid is obtained.

GeneRotex 96 equipped with an array of 96 magnetic rods, allowing it to process up to 96 samples simultaneously.

## Content of the Kit

| Name of Component \ Short Code | | T070H | T071H | T072H | T073H | T074H |
|---|---|---|---|---|---|---|
| REAG1 | Size | 64 T/Box | 40 T/Box | 20 T/Box | 32 T/Box | 20 T/Box |
| | Component | Pre-filled 96-deep well plate | Pre-filled 96-deep well plate | Pre-filled 96-deep well plate | Pre-filled 96-deep well plate | Pre-filled 6 strip tube |
| | Quantity | 4 | 4 | 4 | 4 | 20 |
| | Component Specification | 16 Tests | 10 Tests | 5 Tests | 8 Tests | 1 Test |
| Instructions for Use | | 1 Copy | 1 Copy | 1 Copy | 1 Copy | 1 Copy |

## Materials Required but not Provided

When working in a laboratory, make sure to wear a proper lab coat, powder-free disposable gloves and protective goggles. For more information, please consult the Safety Data Sheet (SDS) available from the product supplier.

- Pipettor: 200 µL or 1000 µL
- Tip: 200 µL or 1000 µL
- Vortex mixer
- Sample holder
- 75% ethanol
- Single Kit Docking (matched with T074H (6 strip tube), could be purchased from Tianlong)
- Extractor

## Warnings and Precautions

**Please be sure to read the precautions before using the kit.**

The kit is used to extract viral DNA and RNA targets. To avoid RNA degradation by RNase during operation, use exclusive-use utensils and sample injectors, and use disposable centrifuge tubes and tips processed by autoclave before using. The operator (researcher or clinical expert) should wear powder-free gloves and a mask.

Please read the manual carefully before using the kit, and strictly follow the manual throughout the operation. The clinical samples should be collected on a clean bench or in a bio-safety cabin.

Before using TIANLONG® automatic nucleic acid extractors (Libex, GeneRotex 96 and PANA 9600S), they must be disinfected by UV light. After an experiment, wipe the inside of the extractor with 75% ethanol and disinfect it with UV light for 15 mins.

Due to the possibility of residual magnetic beads in the eluate following extraction, every possible effort should be made to avoid suctioning of any magnetic beads during eluate absorption.

Do not mix reagents from different batches and use the kit within expiry date.

Dispose of all samples and reagent materials used in an experiment, thoroughly clean and disinfect the experimental work bench.

When using kit, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate Material Safety Data Sheets (MSDSs). These documents are available online in a convenient and compact PDF format at https://www.medtl.net/resources/download/catalogue-all/catalogue, where the operator can find, view and print the appropriate MSDSs.

⚠ **Caution: Do not add any bleach or acidic solution directly to the pre-filled reagent.**

The pre-filled reagent contains guanidinium salts, which, when combined with bleach can form highly reactive compounds. If any of these buffers are spilled, clean immediately with a suitable laboratory detergent and water. If the spilled liquid contains potentially infectious agents, clean the affected area first with laboratory detergent and water, and then with sodium hypochlorite at a concentration of 1% (v/v). The ***Animal Virus DNA and RNA Extraction Kit*** comes with the following warnings and precautions.

| Name of Component | | Hazard pictograms (CLP) | Classification under CLP: | H- and P-statements |
|---|---|---|---|---|
| **REAG 1** | Lysis Buffer<br>Washing Buffer A<br>Washing Buffer B |  | Acute toxicity (oral), Category 4<br>Skin corrosion/irritation, Category 2<br>Serious eye damage/eye irritation, Category 2 | **Hazard statements (CLP)**<br>H302: Harmful if swallowed.<br>H315: Causes skin irritation.<br>H319: Causes serious eye irritation.<br>**Precautionary statements (CLP)**<br>P264 ： Wash hands, forearms and face thoroughly after handling.<br>P280:Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.<br>P321:Specific treatment (see supplemental first aid instruction on this label).<br>P337+P313:If eye irritation persists: Get medical advice/attention.<br>P501:Dispose of contents/container to hazardous or special waste collection point, inaccordance with local, regional, national and/or international regulation. |
| | Magnetic Beads<br>Dilution Buffer<br>Elution Buffer | None | None | None |

***Please see MSDS for more details.***

## Precautions for Safe Handling

Do not dispose of the preparations or the packaging waste in drains leading to the sewage system or in the drainage system for waste not produced by industrial processing/analysis waste.

Any material in contact with reagents should be treated as a biological contaminant and treated in accordance with relevant local regulations.

## Reagent Storage and Handling

The ***Animal Virus DNA and RNA Extraction Kit*** should be stored at room temperature in a cool, dry and well-ventilated area. All components of the kit can be adequately stored for up to 18 months.

The kit should be used in a well-ventilated area, keep away from the source of heat, sparks, open flames, and smoking.

To avoid evaporation, the pre-filled reagent should be used immediately upon opening and should not be placed open for a long period of time.

Avoid exposure to UV light (e.g., for decontamination), which may result in accelerated aging.

## Sample Handling and Storage

Prevent foam formation inside or on the samples. Depending on the starting material, sample pre-treatment may be required. Samples should be stored at room temperature (15~25°C) before starting the experiment.

Samples should be used immediately after collection to extract nucleic acid or stored at 2~8°C for further experiment within 24 hours. While for long-term storage, the samples should be placed at -20°C.

***For detailed information on sample pretreatment, please refer to 2.1.3.***

## Operation Guide

### 1. Automated Extraction Process

Automatic nucleic acid extractors (Libex, GeneRotex 96 and PANA 9600S) enable nucleic acid extraction by magnetic beads. They use magnetic rods to move the beads adsorbed with nucleic acid into different reagent wells and then rapidly and repeatedly stirs the liquid through a mixing sleeve to mix the liquid and magnetic beads thoroughly. After cell lysis, nucleic acid adsorption, washing, and elution, the high-purity nucleic acid is obtained. Automatic nucleic acid extractors are characterized by high automation, rapid extraction speed, stable results, and ease of operation.

The user needs to load samples and magnetic bead nucleic acid extraction reagents into the reaction consumables, the nucleic acid extractors are going to perform all nucleic acid extraction operations according to the experimental procedures. Please refer to the user manual provided with an instrument for operating instructions.

### 2. Operation Steps of Automated Extraction

### 2.1 Automatic Nucleic Acid Extractor (model: Libex)

### 2.1.1 Edit Experiment Program

The extraction procedure of Libex Automatic Nucleic Acid Extractors is as follows:

| No. | Well | Name | Waiting (s) | Mixing (s) | Magnet (s) | Speed | Volume (μL) | Heating State | Temp (°C) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | Remove Bead | 0 | 60 | 10 | 8 | 300 | Closed | 0 |
| 2 | 1 | Lysis | 0 | 180 | 45 | 8 | 750 | Lysis | 90 |
| 3 | 3 | Washing 1 | 0 | 60 | 30 | 7 | 800 | Elution | 90 |
| 4 | 4 | Washing 2 | 0 | 60 | 30 | 7 | 850 | Elution | 90 |
| 5 | 6 | Elution | 60 | 120 | 30 | 7 | 60 | Elution | 90 |
| 6 | 2 | Release Bead | 0 | 60 | 0 | 7 | 300 | Closed | 0 |

### 2.1.2 Reagent preparation

96-deep well plate:

Open the kit and take out the pre-filled reagent, slowly invert it several times to resuspend the magnetic beads, then remove the plastic package and gently shake the 96-well plate so that the reagent and magnetic beads are concentrated on the bottom of the 96-well plate (a 96-well plate horizontal centrifuge can also be used for centrifugation at 500 rpm for 1min). carefully tear off the aluminum foil sealing film before use to avoid liquid splashing.

6 strip tube:

Open the kit and take out the pre-filled 6 strip tube, slowly invert it several times to resuspend the magnetic beads. Gently shake the 6 strip tube so that the reagent and magnetic beads are concentrated on the bottom of the tube. Put the reagent on the docking (Note the direction and make sure that the tube is placed at the lowest level), carefully tear off the aluminum foil sealing film before use to avoid plate vibration and liquid splashing, which is shown in Figure 2.

Figure 2. Put the 6 strip tube on the single kit docking

### 2.1.3 Adding Sample to the Reagent

96-deep well plate:

Add 400 µL of the sample that has been equilibrated to room temperature to column 1 or column 7 of the pre-filled reagent (Be aware of that column No. is for effective wells.)

6 strip tube: Add 400 µL of the sample that has been equilibrated to room temperature to the first well of the pre-filled reagent.

⚠ **Caution: When pipetting the sample, avoid having substance other than liquid adhere to the tip of the sample injector; do not add the sample too quickly to avoid contaminating the upper portion of the well wall; and do not splash air bubbles to avoid contaminating adjacent wells.**

**Note: The following points should be taken into consideration when determining whether a sample is suitable for the *Animal Virus DNA and RNA Extraction Kit*.**

**Type of sample: As stated in the intended use.**

**Nasopharyngeal swabs: Take nasopharyngeal swab samples, vortex shaking, centrifuge at 2000 rpm for 2 mins, and take supernatant samples.**

**Environmental samples: Take environmental samples, vortex shaking, centrifuge at 2000 rpm for 2 mins,and take supernatant samples.**

**Serum samples or blood swab samples: They can be directly loaded.**

**Tissue samples: Weigh 0.05 g ~ 0.15 g of tissue sample, cut it into pieces, add 1 mL of normal saline for vortex mixing, centrifuge at 5000 rpm for 5 mins, and take supernatant for loading.**

**Short-term storage: Samples can be used immediately after collection for nucleic acid extraction or stored at 2~8°C for testing with a maximum storage period of 24 hours.**

**Long-term storage: If the user does not operate the sample temporarily, it should be kept sealed in a refrigerator at -20°C.**

### 2.1.4 Loading in Deep Well Plate

Place the 96-deep well plate in the Automatic Nucleic Acid Extractor and ensure the marked notch of the plate faces front.

Insert the mixing sleeve into the sleeve holder and close the cabin door.

**Note: As shown in Figure3 and Figure 4, the user should ensure that the 96-deep well plate and the single kit docking is properly positioned with the notch facing outward.**

**Note: Place the 96-deep well plate or the single kit docking into the experiment cabin and push the mixing sleeves into the right position. Check the position of the mixing sleeves. Otherwise, instrument dysfunction or malfunction may occur and affect the experiment results.**

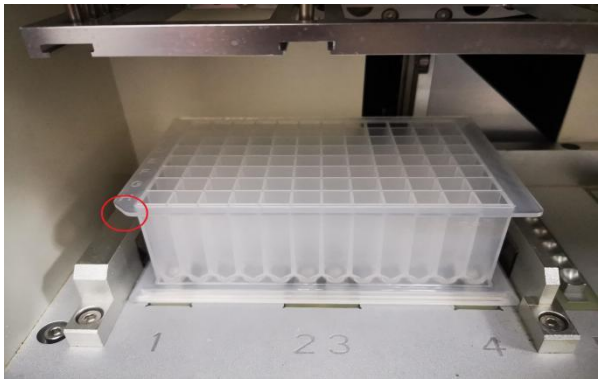

Figure 3. 96-deep well plate

Figure 4. Put the single kit docking into the instrument

### 2.1.5 Procedure Run

For special operations please see 2.1.1. After the procedure is completed, the instrument will notify the user that the experiment has been completed. Transfer the extracted product from well 6 and well 12 to a clean centrifuge tube that is free of nuclease.

**Note: If the user does not analyse the extracted product for the immediate use, please seal and store it in a refrigerator at -20°C.**

**Caution: Any used deep well plate and mixing sleeve should be considered as biological contaminants and disposed of in accordance with relevant regulations.**

**Caution: Using expired reagents or those that are not compatible with this instrument does not guarantee the expected results.**

### 2.1.6 Cleaning and Maintenance of the Instrument

Follow the Cleaning and Maintenance of the Instrument section in accordance with the instruction in the user manual provided with the equipment. Ensure that the experimental chamber is cleaned regularly to minimize the risk of cross-contamination.

## 2.2 Automatic Nucleic Acid Extractor (model: GeneRotex 96)

### 2.2.1 Edit Experiment Program

The extraction procedure of GeneRotex 96 Automatic Nucleic Acid Extractor is as follows:

| Step | Name | Well | Stir (min:s) | Magnetic (min:s) | Wait (min:s) | Speed (rpm) | Volume (μL) | T Control (°C) |
|---|---|---|---|---|---|---|---|---|
| 1 | Remove Bead | 2 | 00:10 | 00:10 | 00:00 | 3000 | 300 | 0 |
| 2 | Lysis | 1 | 03:00 | 00:45 | 00:00 | 3000 | 750 | 120 |
| 3 | Washing 1 | 3 | 01:00 | 00:20 | 00:00 | 3000 | 800 | 120 |
| 4 | Washing 2 | 4 | 01:00 | 00:20 | 01:00 | 3000 | 850 | 120 |
| 5 | Elution | 6 | 02:00 | 00:30 | 00:00 | 2500 | 60 | 120 |

### 2.2.2 Reagent Preparation

96-deep well plate:

Open the kit and take out the pre-filled reagent, slowly invert it several times to resuspend the magnetic beads. Gently shake the 96-well plate so that the reagent and magnetic beads are concentrated on the bottom of the 96-well plate (A 96-well plate horizontal centrifuge can also be used for centrifugation at 500 rpm for 1min). Carefully tear off the aluminum foil sealing film to avoid the liquid splashing.

6 strip tube:

Open the kit and take out the pre-filled 6 strip tube, slowly invert it several times to resuspend the magnetic beads. Gently shake the 6 strip tube so that the reagent and magnetic beads are concentrated

on the bottom of the tube. Put the reagent on the docking (Note the direction and make sure that the tube is placed at the lowest level), carefully tear off the aluminum foil sealing film before use to avoid the liquid splashing, which is shown in Figure 2.

### 2.2.3 Adding Sample to the Reagent

96-deep well plate: Add 400 µL of the sample that has been equilibrated to room temperature to column 1 or column 7 of the pre-filled reagent (Note the column No. is for effective wells.)

6 strip tube: Add 400 µL of the sample that has been equilibrated to room temperature to the first well of the pre-filled reagent.

⚠ **Caution: When pipetting the sample, avoid having substance other than liquid adhere to the tip of the sample injector; do not add the sample too quickly to avoid contaminating the upper portion of the well wall; and do not splash air bubbles to avoid contaminating adjacent wells.**

**Note: The following points should be taken into consideration when determining whether a sample is suitable for the *Animal Virus DNA and RNA Extraction Kit*.**

**Type of sample: As stated in the intended use.**

**Nasopharyngeal swabs: Take nasopharyngeal swab samples, vortex shaking, centrifuge at 2000 rpm for 2 mins, and take supernatant samples.**

**Environmental samples: Take environmental samples, vortex shaking, centrifuge at 2000 rpm for 2 mins, and take supernatant samples.**

**Serum samples or blood swab samples: They can be directly loaded.**

**Tissue samples: Weigh 0.05 g ~ 0.15 g of tissue sample, cut it into pieces, add 1 mL of normal saline for vortex mixing, centrifuge at 5000 rpm for 5 mins, and take supernatant for loading.**

**Short-term storage: Samples can be used immediately after collection for nucleic acid extraction or stored at 2~8°C for testing with a maximum storage period of 24 hours.**

**Long-term storage: If the user does not operate the sample temporarily, it should be kept sealed in a refrigerator at -20°C.**

### 2.2.4 Loading in the Deep Well Plate

Properly position the 96-deep well plate or 6 strip tube containing the sample in the experimental chamber of the automatic nucleic acid extractor (GeneRotex 96).

**Note: The user should ensure that the 96-deep well plate should be placed with its notch at the upper left corner, as shown in Figure 5 and Figure 6.**

Insert the rotatory mixing sleeve into column 2 and/or column 8 of the deep well plate and close the experimental cabin door.

⚠ **Caution: The user must ensure that the rotatory mixing sleeves are placed properly; otherwise, the instrument may operate abnormally, or the magnetic rods may become contaminated.**

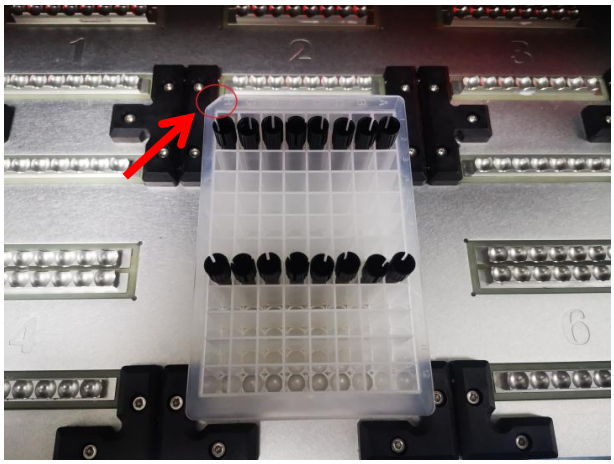

Figure 5. 96-deep well plate

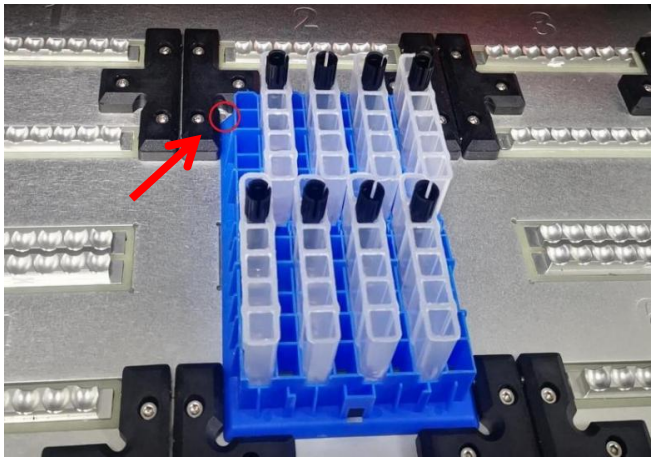

Figure 6. Put the single kit docking into the instrument

### 2.2.5 Experimental Procedure Run

For special operations please see 2.2.1. After the procedure is completed, the instrument will notify the user that the experiment has been completed. Transfer the extracted product from well 6 and well 12 to a clean centrifuge tube that is free of nuclease.

**Note: If the user is not going to use the extracted product immediately, please seal and store it in a refrigerator at -20°C.**

### 2.2.6 Cleaning and Maintenance of the Instrument

Follow the Cleaning and Maintenance of the Instrument in accordance with the user manual provided with the equipment. Ensure that the experimental cabin is cleaned regularly to minimize the risk of cross-contamination.

## 2.3 Automatic Nucleic Acid Workstation (model: PANA 9600S)

### 2.3.1 Experiment Preparation

### Reagent Preparation

Please remove the PCR reagent from the refrigerator, thaw and balance to room temperature.

### Sample Preparation

- Please firstly record the sample information according to the requirements of laboratory operation.
- Please complete the sample centrifugation and other pre-processing operations according to the experimental requirements and add or divide the prepared samples into sample tubes in the biosafety cabinet.
- Please insert the sample tubes into the sample holder and slowly push the sample holder along the track into the sample cabin.

**Note: The following points should be taken into consideration when determining whether a sample is suitable for the *Animal Virus DNA and RNA Extraction Kit*.**

**Type of sample: As stated in the intended use.**

**Nasopharyngeal swabs: Take nasopharyngeal swab samples, vortex shaking, centrifuge at 2000 rpm for 2 mins, and take supernatant samples.**

**Environmental samples: Take environmental samples, vortex shaking, centrifuge at 2000 rpm for 2 mins, and take supernatant samples.**

**Serum samples or blood swab samples: They can be directly loaded.**

**Tissue samples: Weigh 0.05 g ~ 0.15 g of tissue sample, cut it into pieces, add 1 mL of normal saline for vortex mixing, centrifuge at 5000 rpm for 5 mins, and take supernatant for loading.**

**Short-term storage: Samples can be used immediately after collection for nucleic acid extraction orstored at 2~8°C for testing with a maximum storage period of 24 hours.**

**Long-term storage: If the user does not operate the sample temporarily, it should be kept sealed in a refrigerator at -20°C.**

### Consumable Preparation

- User can prepare the corresponding reagent and consumables and load them in the right position according to the requirement information of reagent and consumable.

### 2.3.2 Experiment Running

**a.** Pre-filled 96 deep well plate: Take out the plates from the kit box, turn it up and down to suspend the magnetic beads. Then remove the vacuum package, gently swing the plates to make sure that the magnetic beads are gathered at the bottom of the wells. Please carefully tear down the aluminum foil sealing membrane to avoid liquid splash.

**b.** Please follow the manual to set the protocol.

### 2.3.3 Experiment Complete

#### Product Transfer

▸ After the experiment, please add the PCR consumables and transfer the PCR reaction system established by the PANA workstation to the PCR equipment for follow-up experiment.
▸ After the experiment, please cover the sample reserve tubes and transfer the reserved sample or nucleic acid extracted from the PANA workstation to the -20°C refrigerator.

#### Reagent and Sample Recovery

▸ After the experiment, please cover the reagent bottles and recover the remaining reagents from the reagent cabin of the PANA workstation and store them in -20°C refrigerator together with the code and the reagent holder.
▸ After the experiment, please take out the sample holders, cover the sample tubes, and store the sample in the refrigerator.

#### Instrument Cleaning and Maintenance

▸ After the experiment, consider the used consumables such as deep well plates, rod covers, premix bottles as biological contaminated and comply with all applicable local or national regulations for the disposal of potentially infected waste.
▸ After the experiment, please comply with all applicable local or national regulations, dispose the biological waste in the waste bin within the waste cabin of the PANA workstation, and replace the waste bag in the waste bin.

#### Troubleshooting Guide

This troubleshooting guide should assist you in resolving any problems that arise during the experimental process. For more information and Frequently Asked Questions, please visit our Technical Support Centre at http://www.medtl.net. The scientists in our Tianlong company's Technical Services Department are always available to answer any questions you may have about the information and protocols contained in the manual, as well as sample and assay technologies (Contact information is included on the back cover or at http://www.medtl.net).

When an exception or error occurs during the experiment, the current run step is terminated/stopped. After resolving the error or exception, restart the run from the beginning. The troubleshooting guide is shown in the following table.

| No. | Fault Symptom | Fault Cause | Handling Method |
|---|---|---|---|
| 1 | The well plate vibrates and the liquid splashes when tearing off the aluminium foil sealing film. | When tearing the film, please press the well plate to prevent it from rocking. | The reagent for this plate shall be scrapped, and re-extraction shall be performed. |
| 2 | Add the sample to unexpected wells. | Please read this manual carefully before adding samples. | The reagent for this plate shall be scrapped, and re-extraction shall be performed. |
| 3 | The amount of liquid in the reagent wells is insufficient | / | Contact the after-sales service of Tianlong. |
| 4 | Reuse of pre-filled components | Please read the precautions in this manual before using the kit. | re-extraction of nucleic acid is performed. |
| 5 | Abnormal noise from the instrument during extraction | The 96-deep well plate may be placed correctly. | Reposition the deep well plate. |

| | | | |
|---|---|---|---|
| | | The mixing sleeve may not be inserted in place. | Reinsert the stirring sleeve. |
| 6 | Poor extraction performance | Please follow operation requirements from the manual. | Contact the after-sales service of Tianlong. |
| | | The temperature control components of the instrument may be abnormal. | Contact the after-sales service of Tianlong. |
| | | Other | Contact the after-sales service of Tianlong. |

* **Ensure that the reagents have been preserved and used according to the manufacturer's instructions.**

## Quality Control

In accordance with Tianlong Company's ISO-certified Quality Management, each lot of ***Animal Virus DNA and RNA Extraction Kit*** is tested against predetermined specifications to ensure consistent product quality.

## Limitations of Test Methods

The system performance has been established through performance evaluation studies using Nasopharyngeal Swab, Environmental Samples, Serum Samples or Blood swab Samples and Tissue Samples to purify viral DNA and RNA.

It is the user's responsibility to validate system performance for any procedures used in their laboratory that are not covered by the performance evaluation studies of Xi'an Tianlong Science and Technology Co., Ltd.

Although the kit is intended for use in public health and scientific research, the purity and quality of extraction results are also affected by the testing instruments and personnel. Moreover, the kit uses a specially formulated eluent that can affect the absorbance value, so it is not recommended to use a UV rays spectrophotometer to measure the extraction effect directly.

The extraction kit is intended for use with clinical diagnostic samples, forensic materials, and scientific research samples. The instrument and operator have an effect on the concentration and purity of the extracted product. Any generated diagnostic results must be interpreted in conjunction with the other clinical or laboratory findings.

## Safety Symbols and Signs

| No. | Symbol | Implication |
|---|---|---|
| 1 | REF | Catalogue number |
| 2 | LOT | Batch code |
| 3 | Σ <N> | Contains sufficient for <N> tests |
| 4 | | Use by date |
| 5 | | Caution |
| 6 | | Temperature limit |
| 7 | | Reminder |
| 8 | | Manufacturer |

| | | |
|---|---|---|
| 9 |  | Do not re-use |
| 10 | CONT | Content of the kit |
| 11 | REAG1 | Pre-filled 96-deep well plate/6 strip tube |
| 12 |  | Warning |
| 13 |   | PAP21: Not-corrugated cardboard |

## Contact Information

For technical assistance and more information, please contact our Technical Support Center at +86-29-82682132 (Tel), +86-29-82216680 (Fax), inquiry@medtl.com or contact your local distributor.

For up-to-date licensing information or product-specific disclaimers, please see the respective User Guide. Tianlong User Guides are available at www.medtl.net or can be requested from Tianlong Technical Services or the local distributor.

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