

Automated Nucleic Acid Extractor

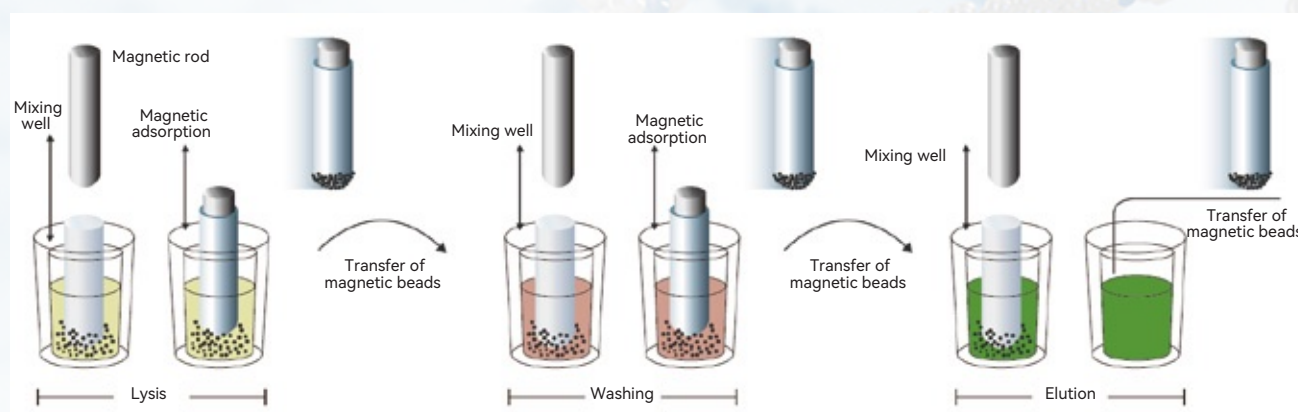
GenoScout EM



Product Introduction

The Automated Nucleic Acid Extractor is a high-throughput, high-precision device designed for nucleic acid extraction. It is paired with pre-packaged extraction reagents based on superparamagnetic silica-coated magnetic beads, enabling the extraction and purification of nucleic acids from a variety of biological samples, including blood, tissue, cells, body fluids, bacteria and viruses. The system realizes the purification and enrichment of nucleic acid through the adsorption, transfer, and release of magnetic beads by magnetic rods. Characterized by rapid and user-friendly operation with a high level of automation, the system is widely applicable in the fields of molecular diagnostics and animal disease detection.

Technical Principle



In the lysis buffer, cells or pathogens are disrupted, releasing nucleic acids. Nucleic acids are adsorbed onto the magnetic beads through hydrogen bonding or electrostatic interactions.



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Product Advantage



High Extraction Efficiency

It is made of permanent magnet material with strong magnetic force for magnetic bead adsorption, effectively avoiding the problem of residual magnetic beads.



Simple and Efficient Operation

Simply add the samples, and the system will perform fully automated operations, completing the extraction of 32 samples within only **30 min.**



Flexible and Convenient Use

It is equipped with a touchscreen operating system, preset programs, and a one-button start, enabling simultaneous extraction of DNA/RNA.



Precise Design

The system has a deep-well heating block for more accurate temperature control and a lead screw design for high operational precision and enhanced stability.



Effective Contamination Prevention

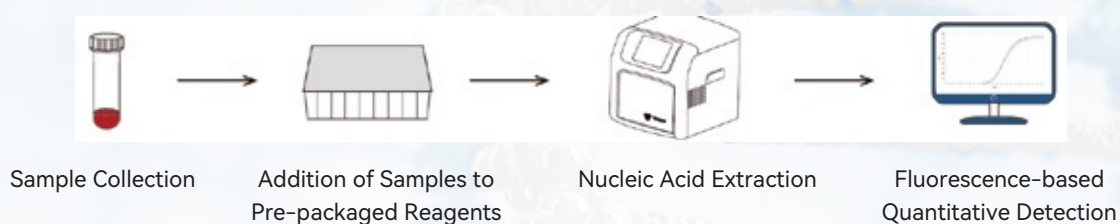
The system is equipped with built-in UV sterilization and a HEPA filtration system to reduce the risk of contamination, and the shut-down time is customizable.



Power-off Protection

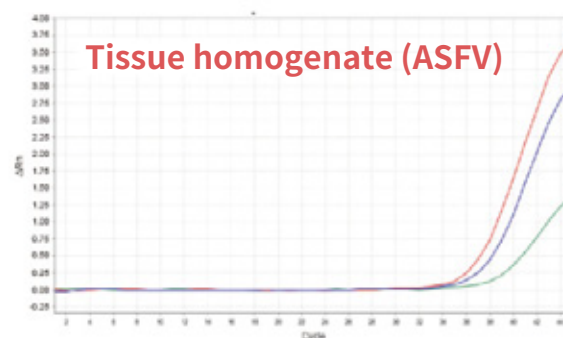
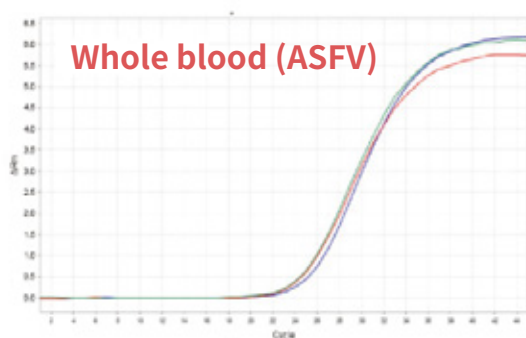
The system can continue to operate after power restoration, avoiding sample waste caused by midway power failure.

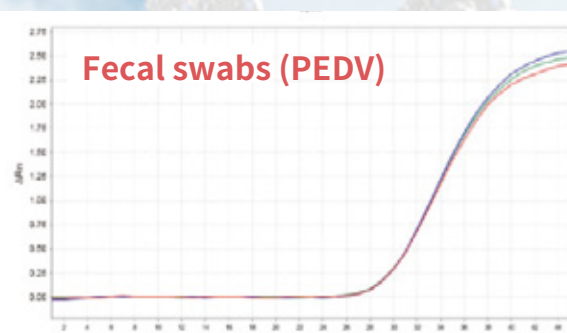
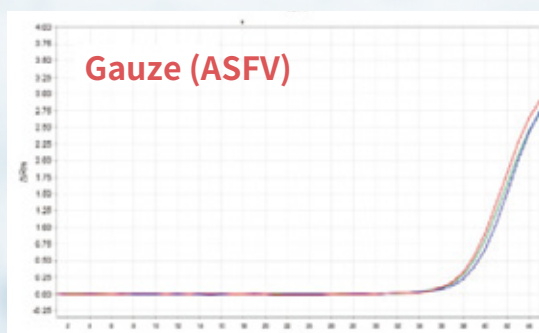
Experimental Procedure



Experiment Case

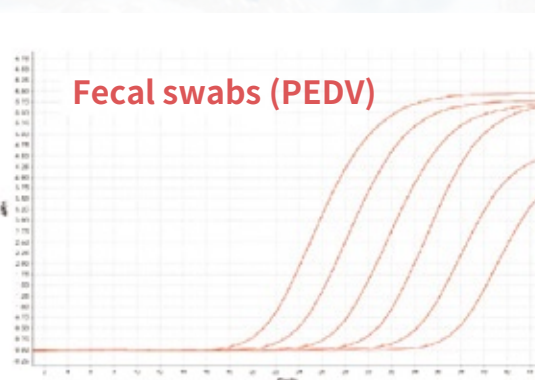
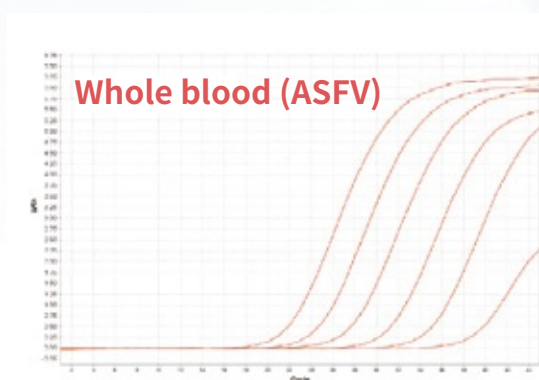
Wide Sample Compatibility Range





Three different brands of automated nucleic acid extraction solutions were used to extract nucleic acids of African swine fever virus (ASFV) from pig whole blood, tissue homogenate and gauze, and nucleic acids of porcine epidemic diarrhea virus (PEDV) were extracted from fecal swabs, followed by fluorescence-based quantitative detection. Based on the results, GeneMind Automated Nucleic Acid Extractor (GenoScout EM) is better compatible with a variety of sample types and demonstrates excellent performance in multiple sample types.

High Extraction Efficiency



Nucleic acids of African swine fever virus (ASFV) from pig whole blood and nucleic acids of porcine epidemic diarrhea virus (PEDV) from fecal swabs were extracted using GeneMind GenoScout pre-packaged Blood DNA Extraction Kit (Cat No. L000109), followed by fluorescence-based quantitative detection. The results indicate that GeneMind extraction kit can efficiently extract nucleic acids from samples of various concentrations, with a good linear relationship.

Ordering Information

| Catalogue Number | Product Name | Specification |
|------------------|---|----------------------|
| M000024 | Automated Nucleic Acid Extractor (GenoScout EM) | RUO |
| M000025 | Automated Nucleic Acid Extractor (GenoScout EM Dx) | CE-IVD |
| L000105 | GenoScout Pre-packaged Cell-Free DNA Extraction Kit | 96 tests/kit, RUO |
| L000108 | Cell-Free DNA Isolation Kit (Pre-packaged) | 96 tests/kit, CE-IVD |

Product Parameters

| Product Name | Automated Nucleic Acid Extractor |
|-------------------------------------|--|
| Model | GenoScout EM / GenoScout EM Dx |
| Sample throughput | 1-32 |
| Treated volume | 20-1,000 μ L |
| Consumables used | 96-deep-well plate + magnetic rod sleeve |
| Purification well-to-well variation | $\leq 5\%$ |
| Operating humidity range | 10%-90% |
| Operating temperature range | 10-40°C |

Product Parameters

| Product Name | Automated Nucleic Acid Extractor |
|---|---|
| Heating temperature control range | Heating temperature during lysis: From room temperature to 120°C; heating temperature during elution: From room temperature to 120°C. |
| Temperature accuracy | ±1°C |
| Oscillation mixing | Adjustable multi-gear, compatible with different reagent integration solutions. |
| Sterilization and decontamination methods | UV lamp, HEPA filtration system and anti-aerosol fan |
| Operating system | Chinese/English operating system |
| Operation interface | 8-inch color touchscreen, compatible with external mouse |
| Internal program | Capable of storing >500 sets of programs |
| Program management | Capable of creation, editing, saving as, and deletion of model programs; flexible and free program editing |
| Port mode | 3 USB ports (Type A), 1 Ethernet port, and 1 DB9 debugging port |
| Network | Wireless WiFi |
| Input power supply | AC 100-240 V, 50 Hz/60 Hz, 500 W |
| Power-off protection | Yes |
| Dimension (W × D × H) | 412 mm × 410 mm × 430 mm |
| Weight | 30 kg |



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