



# HCY Automatic Nucleic Acid Extractor

CY-NAAE-2106

A simple fast, high throughput and cost effective nucleic acid extraction



IVD

In Vitro Diagnostic Medical Device



# Basic Principles

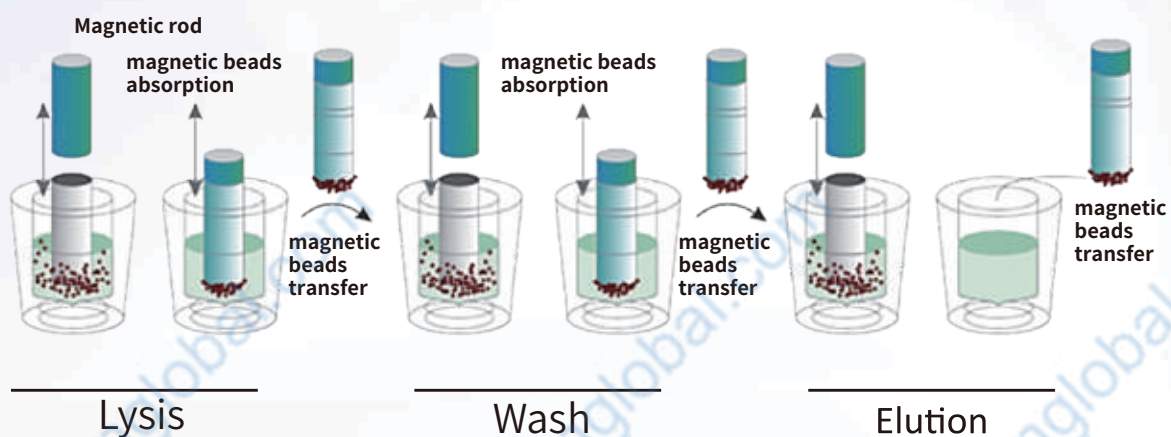
HCY Automatic nucleic acid extractor applying simple, fast, high throughput and cost effective magnetic bead based technique automatically streamline the tasks of extraction and rapid isolation of highly pure nucleic acids from various types sample, especially efficient in detect pandemic infection on citizens in short time.

The System enables the parallel processing of up to 1-96 samples per run. With the pre-programmed protocols and magnetic bead based reagent cartridges, the system provides consistent and stable nucleic acid purification for every busy laboratory.

## In light of the worldwide COVID-19 pandemic

HCY Automatic nucleic acid extraction system can be used in combination with viral DNA/RNA extraction reagents to enable nucleic acid extraction in a rapid, efficient and stable manner for subsequent clinical molecular diagnosis. The entire workflow can be executed in a biosafety cabinet to protect operators from potential hazards.

## Schematic diagram of extractor

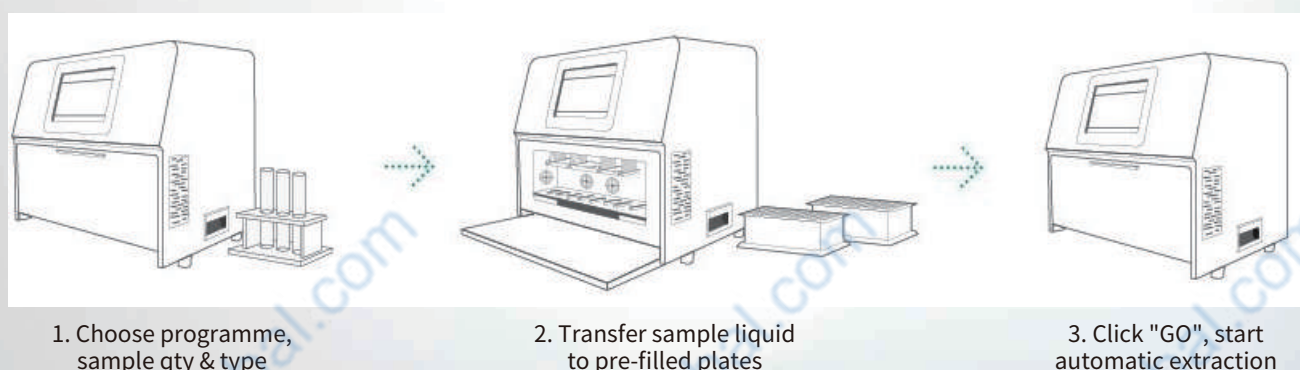


## [Operation procedures]



### Downstream assays :

Extracted nucleic acids can be used for molecular testing with a variety of techniques such as PCR, qPCR, MLPA, NGS laboratory preparation, and microarray.



## Unique extraction process

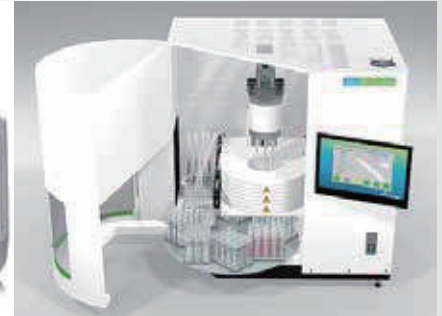
Common extractors in the market, is sample platform rotateing & magnetic rod panel static. HCY Automatic nucleic acid extractor is exclusive design, sample platform static & magnetic rod panel rotating.



HCY



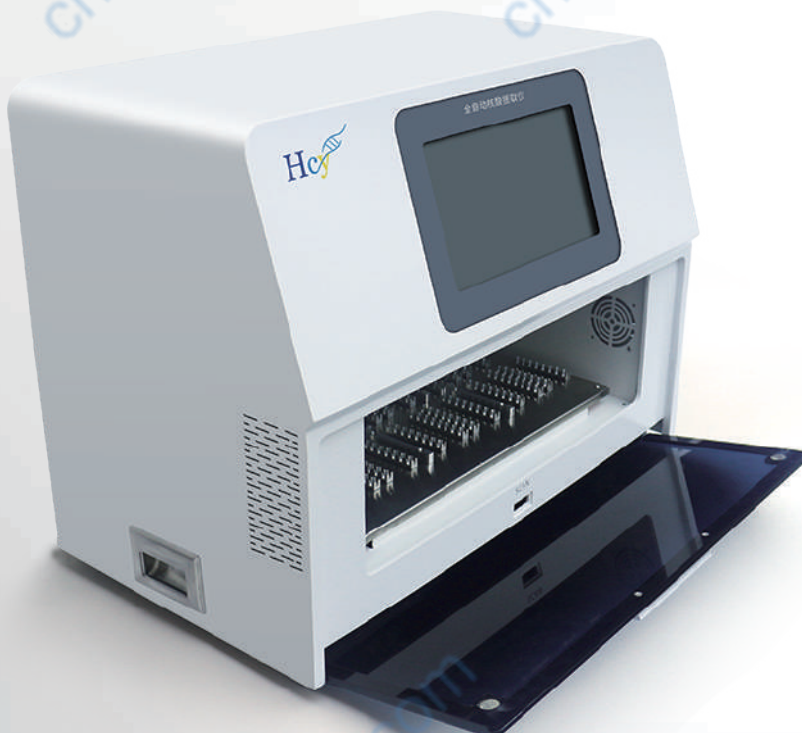
ordinary



## How to make it?

1. Each independent prefilled 96 Kit includes 2 sets of complete line of extraction reagents.
2. Magnetic rod panel precisely move on the prefilled 96 Kit , and execute the extraction process automatically.

## Standard Benefit

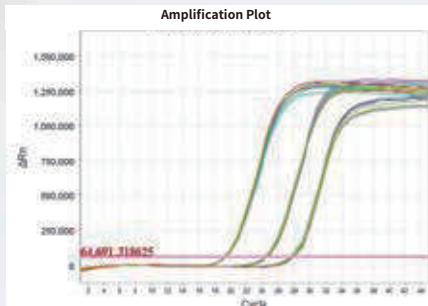


1. Easy Operation, very simple handling for lab staff on sample processing
2. Pre-setting sofeware, Lab staff just click i con on the led screen
3. Visual extraction progress
4. Short processing time:18 minutes
5. User friendly Operation  
Stop at any time when emergency or power off, no affect final extraction yield
6. Specially designed heating block for 96-well plates, ensuring even heating during the experiment.
7. Safe UV lamp, 96-well prepacked plate and disposable tip, avoiding cross-contamination by minimizing contact with samples.

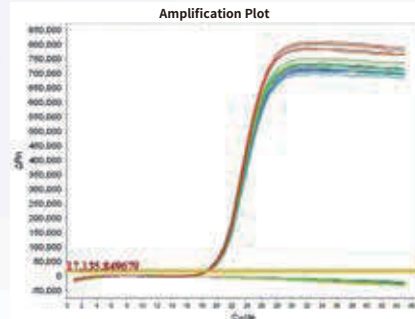


## Viral DNA/RNA extraction

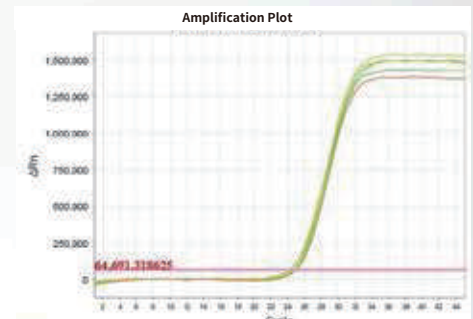
The ANDiS 350 system and the ANDiS Viral RNA Auto Extraction & Purification Kit allow for automated extraction of viral DNA/RNA, from a variety of specimen types, such as serum, plasma, swab, urine and blister fluid.



RNA was extracted from three specimens and was subjected to PCR amplification in 8 replicates, demonstrating a high stability ( $CV < 1\%$  within and between batches) of the assays.

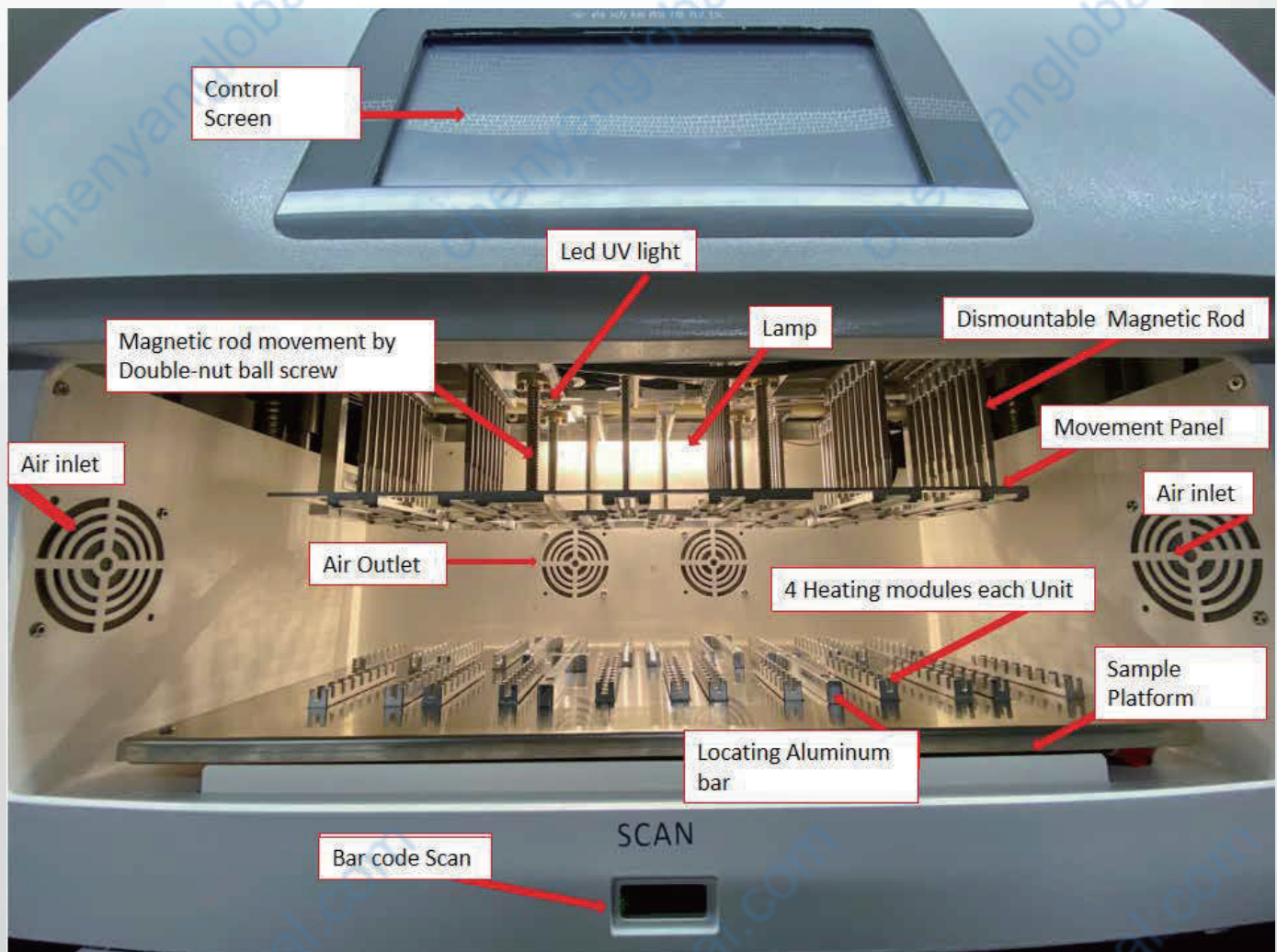


NO cross-contamination was detected during the extraction.

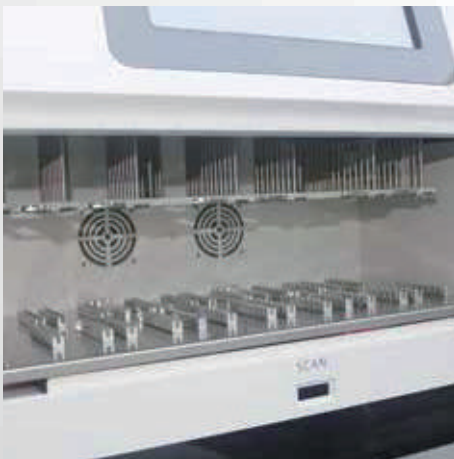


Recovery rate for viral RNA extraction is about 70%; beads collection efficiency is  $> 95\%$ .

## Detail Structure



## Detail Structure





## Special Benefit

### 1. Decrease reagent cost over 83%

When sample quantity <16 pcs per run, only use 1 pc prefilled 96 Kit, can execute the nucleic acid extraction.

### 2. Flexible configuration of prefilled 96 Kit

Can adjust the reagent type & position in the 96 well plate, to match different extractor

### 3. Dismountable magnetic rod

When sample quantity per run <16 pcs, or even <8 pcs, can put only 1 pc prefilled 96 Kit, and hand teardown the some magnetic rods. Then the same prefilled 96 Kit can be used in next extraction process. save much reagent cost.

### 4. High recovery of magnetic beads

After magnetic beads are absorbed on the head of the magnetic rod, the magnetic rod can be lifted higher 0.1-0.2mm, for higher recovery of magnetic beads ensures high yield of nucleic acid.

### 5. New strong magnetic rod

With the newly designed strong magnetic rod, the magnetic beads are absorbed on the head of the magnetic rod, so as to ensure that the elution buffer can still cover all the magnetic beads even with a small elution volume.

### 6. Accurate heating

4 heating modules in each Unit, precise heating the stipulated well, avoid heating the adjacent

### 7. Precise movement of magnetic Rod

The magnetic rod is driven by Double-nut ball screw, to ensure that the rod runs smoothly, high precision and longer service life of the rod.

### 8. Large magnetic rod vibration amplitude.

The driving device is equipped with a high-performance stepping motor, with large magnetic rod vibration amplitude. The vibration amplitude can be set according to the volume of the solution to ensure good and even blending effect. Each moving component is protected by the limit position protection mechanism to avoid instrument failure.

### 9. Bar code scan to import program sequence & paramter.

The bar codes shall be printed on the prefilled 96 Kit



## Consumables for the extraction system

### 1. The 96-well prepacked plate (standard automation format)

### 2. Magnetic rod cover

### 3. 8-strip tip comb



Consumables for the extraction system

8-well reagent tube + magnetic rod sleeve



The 96-well prepacked plate

# HcY Automatic Nucleic Acid Extractor



	Parameter
Product name	Nucleic Acid Automatic Extractor System (Throughput-96)
Model	CY-NAAE-2106
Dimension(mm)	600(L)×420(W)×500(H)
Certification	FDA/NMPA/Rohs
Processing Volume	20-400ul
Extraction throughput	1-96, flexible
Sample Types	cultured cells,tissues, buccal swabs,blood
Well plate	96 deep well plate(V bottom)
Consumables	8-strip tip comb
Nucleic acid extraction time	10~30 minutes
Heating temperature Adjustable	from room temperature to 115°C /240°F
Temperature control precision	±0.1°C
Heating range	Room temperature +5°C~125°C
Reagent type	Magnetic bead-based, open source reagents
Nucleic acid extraction purity	A260/A280=1.6~1.9
Inter-well purification variation	CV<3%
Magnetic beads recovery rate	≥90%
Touch screen size	7-inch touchable color screen
Disinfection/decontamination method	UV lamp, 96-well prepacked plate and disposable tip
Input power	AC 100-240V~, 3.5-1.8A, 50/60Hz
Product weight	29±1kg



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