

# TGuide S32 Automated Nucleic Acid Extractor



- Unique magnetic rod movement mode
- New strong adsorption mode
- Dual control mode of Windows Pad and screen button

# TGuide S32 Automated Nucleic Acid Extractor

TGuide S32 Automated Nuclear Acid Extractor adopts the latest magnetic rod adsorption and transfer method to purify nucleic acid. 96-deep well plates and different kinds of magnetic beads extraction reagents are applied to automatically extract and purify nucleic acid from 1-32 blood/cells/tissues/viruses and other samples. The instrument uses the special magnetic rods to absorb, transfer and release magnetic beads, so as to realize the transfer of magnetic beads and nucleic acids and improve the automation level.

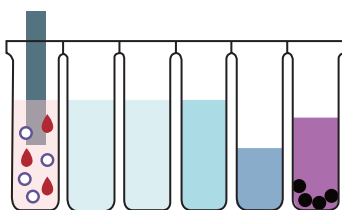


## Principle of Nucleic Acid Extraction and Purification by Magnetic Rod Method

After the sample lysis, the nucleic acid dissociated in the lysate/binding solution is specifically adsorbed by magnetic beads. Through the cooperation of magnetic rod and magnetic tip comb, the magnetic attraction, transfer, release and mixing actions are completed to separate the magnetic beads adsorbed with nucleic acid from the lysate/binding solution. The impurities that are non-specifically bound to the magnetic beads are removed in the washing well. The nucleic acid molecules are then dissolved in the elution buffer.

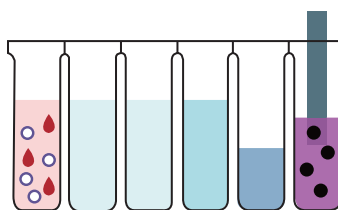
### Step 1

Sample lysis



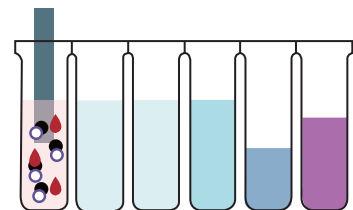
### Step 2

Magnetic beads activation



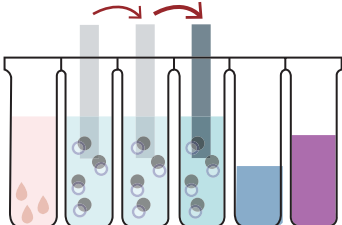
### Step 3

DNA/RNA adsorption



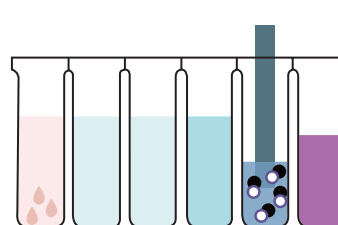
### Step 4

DNA/RNA washing



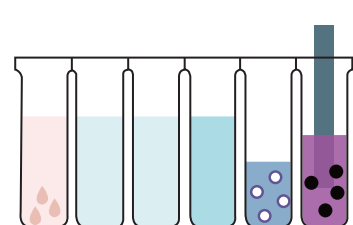
### Step 5

DNA/RNA elution



### Step 6

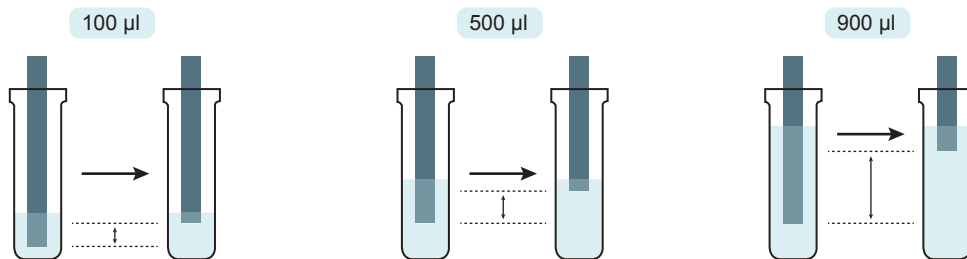
Release of magnetic beads



TGuide S32 Magnetic Blood DNA Kit (DP601) was applied as an example.

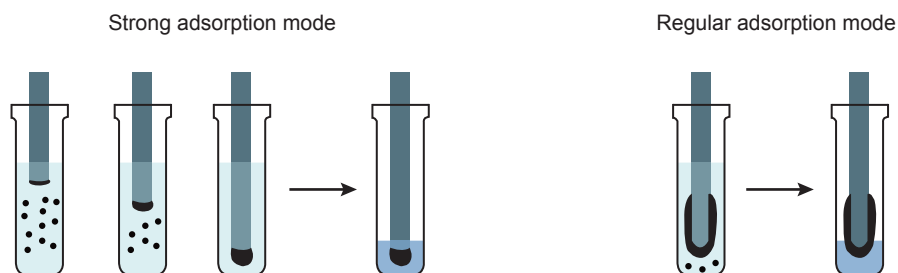
## Unique Movement Mode of Magnetic Rod

The driving device adopts stepping motor, ensuring large vibration amplitude of the magnetic rod. The vibration amplitude is automatically adjusted according to the volume of the solution, making sure a good mixing effect. The driving device adopts ball screw, ensuring the magnetic rod to operate stably, with high precision and long service life. All moving parts are equipped with limit position protection function, so that the instrument operates stably and orderly to avoid failure.



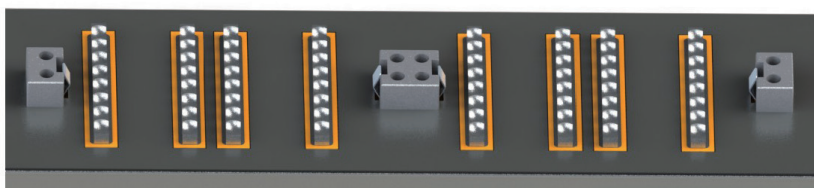
## New Strong Adsorption Mode

Through the newly designed strong adsorption mode, the magnetic beads are adsorbed on the tip of the magnetic rod, so as to ensure that the eluate can cover all the magnetic beads even when the elution volume is very small, leading to good adsorption effect of the magnetic beads and high nucleic acid yield.



## Optimized Lysis/Elution Heating Slot Design

The design of 1/5 column lysis/elution heating slots makes sure the separation of lysis and elution slots, which effectively avoid the evaporation of eluent caused by the heating at the lysis step, so that the recovery volume of nucleic acid is more accurate.



## Dual Control Mode of Windows Pad and Screen Button

On the basis of inheriting the classic key operation, remote control is carried out with high-performance Windows Pad to perfect the interactive interface of Windows application setting, which is more in line with the customers' daily habits of working and learning.



## Pollution Control, Safety Protection

The cross-contamination control system and UV sterilization module can effectively avoid cross-contamination between wells and plates. The whole process of the instrument is automatic and closed operated, and the prepacked sealing reagent and disposable consumables are used to minimize the contact between the laboratory personnel and the chemical reagent, so as to ensure the operation safety.



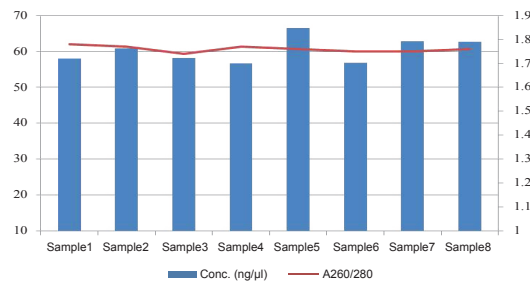
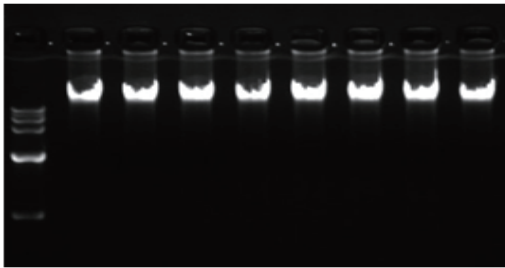
## Reliable Reagents for Magnetic Beads Nucleic Acid Extraction

Based on TIANGEN's nucleic acid extraction and purification reagent platform, we provide a comprehensive, complete and high-quality automatic nucleic acid extraction and purification solution.



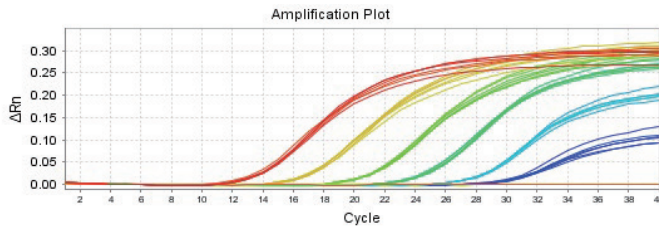


## Blood Genomic DNA Extraction



Sample: 200 μl frozen EDTA anticoagulant whole blood. Genomic DNA is dissolved in 100 μl Buffer TB. DNA Marker: TIANGEN MD110, D15000 DNA Marker

## Virus Genomic DNA Extraction

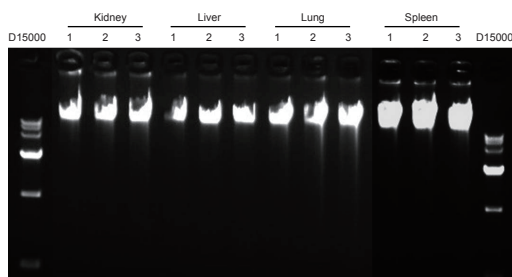


Samples: avian influenza H5 virus standard antigen,  $10^{-2}$ ,  $10^{-3}$ ,  $10^{-4}$ ,  $10^{-5}$ ,  $10^{-6}$ ,  $10^{-7}$  gradient dilution and NTC control. Virus RNA was dissolved in 100 μl RNase-free ddH<sub>2</sub>O.

RT-qPCR detection kit: TIANGEN FP304, Quant One Step qRT-PCR kit (Probe)

RT-qPCR instrument: AB 7500 Fast Real-time PCR System

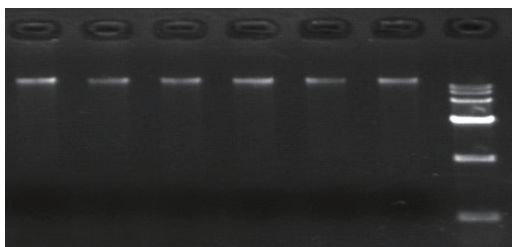
## Animal Tissues Genomic DNA Extraction



Genomic DNA extraction yield from different tissues of rats

Tissue sample	Sample input	DNA yield (μg)	OD260/280	OD260/230
Kidney	20 mg	20.4±0.6	1.78±0.02	1.59±0.07
Liver	20 mg	17.0±0.8	1.78±0.01	1.57±0.05
Lung	20 mg	23.0±1.1	1.77±0.03	1.51±0.15
Spleen	20 mg	47.2±2.2	1.80±0.02	1.82±0.19

## Mouth Swabs Genomic DNA Extraction



	Sample1	Sample2	Sample3	Sample4	Sample5	Sample6
Conc.(ng/μl)	28.1	27.1	28.6	28.6	30.3	28.3
OD260/280	1.89	1.94	1.85	1.88	1.85	1.89

Samples: mouth swab samplers were collected by swabbed 20 times in the mouth with the sampler and stored in a centrifuge tube with 450 μl Buffer GA. Genomic DNA was dissolved in 60 μl Buffer TB.

DNA Marker: TIANGEN MD110, D15000 DNA Marker

## Technical Parameters of TGuide S32 Automated Nucleic Acid Extractor

Sample throughput	32
Solution treatment volume	20-1000 $\mu$ l
Bead recovery efficiency	$\geq 98\%$
Lysis/elution temp. control range	Room temp +5 ~ 125
Vibration mixing mode	Multiple adjustable vibration speed Adaptive vibration amplitude for various solution volume
Adsorption mode	Regular/strong adsorption mode
Pollution control	Cross-contamination control system and UV sterilization module
Operation mode	Windows Pad and Screen key
Interface mode	USB, RS232 data interface Bluetooth, WiFi wireless interface
Dimensions (L x W x H)	430 mm×372 mm×450 mm
Weight	25.5 kg
Power Supply	100-240VAC, 50-60Hz, 450W

## TGuide S32 Automated Nucleic Acid Extractor and Selection Guide of Supporting Reagent and Consumables

Instrument	Cat. no.	Product name	Package
	YOSE-S32	TGuide S32 Automated Nucleic Acid Extractor	1set
Consumables	Cat. no.	Product name	Package
	OSE-TGA-S02	TGuide S32 96-Deep-Well Plate	24/pack
	OSE-TGA-S03	TGuide S32 Tip Comb	2/pack
Packed sealed reagents	Cat. no.	Product name	Package
	DP601	TGuide S32 Magnetic Blood DNA Kit	96 preps
	DP602	TGuide S32 Magnetic Tissue DNA Kit	96 preps
	DP603	TGuide S32 Magnetic Swab Genomic DNA Kit	96 preps
	DP604	TGuide S32 Magnetic Viral DNA/RNA Kit	96 preps
	DP605	TGuide S32 Magnetic Saliva DNA Kit	96 preps
	DP606	TGuide S32 Magnetic FFPE DNA Kit	96 preps
	DP607	TGuide S32 Magnetic Plant DNA Kit	96 preps
	DP608	TGuide S32 Magnetic Blood Spots DNA Kit	96 preps
	DP609	TGuide S32 Magnetic Serum/Plasma DNA Kit	96 preps
	DP661	TGuide S32 Magnetic Tissue RNA Kit	96 preps
	DP662	TGuide S32 Magnetic Plant RNA Kit	96 preps
	DP641	TGuide S32 Magnetic Plasmid Kit	96 preps
	DP642	TGuide S32 Magnetic DNA Purification Kit	96 preps
	DP643	TGuide S32 Magnetic Gel Purification Kit	96 preps

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