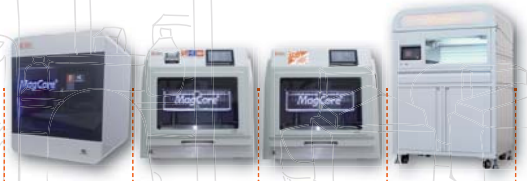
MagCore® Automated Nucleic Acid Extractor

MagCore® Automated Nucleic Acid Extractor Overview

■ Standard □ Optional



	Process Monitoring through your Smartphone MagCore® Plus II	Spectrophotometer Built-in MagCore® Super	Most popular with high CP value MagCore® HF16 Plus	High Capacity Module MagCore® HF48
16 Sample — 1-16 Samples	■	■	■	
48 Sample — 1-48 Samples				■
Spectrophotometer		■		
Touch Screen	■	■	■	■
UV Decontamination	■	■	■	■
Barcode Scanner	□	■	□	□
Thermo Printer		■		
Built-in Programs (Upgradeable via RS232 ports)				
Built-in Programs (Upgradeable via USB ports, Plug&Play)	■	■	■	■
USB Output (USB flash drive not provided)	■	■	■	
Progress Monitoring (Wireless)	■			
LIMS (Laboratory Information Management System)	■	□		

MagCore® Automated Nucleic Acid Extractors will keep you ahead in Life Science

MagCore® Extractor System is a simple, fast and cost-effective instrument for automated purification of nucleic acids from a diverse range of sample sources. Featuring pre-programmed protocols and our unique magnetic-bead technology, MagCore System delivers efficient and consistent nucleic acid purification.

MagCore® Extractors are bench-top instruments ensuring efficient and cross-contamination free isolation of DNA/RNA. Built-in UV lamps allow to easily and efficiently decontaminate the instruments after run.

Flexibility

MagCore® Automated Extraction System allows you to save time without sacrificing consistency and purity. You can use one instrument to purify DNA and RNA from a broad variety of sample types: from blood to mouse tails and almost everything in between.

Ease Of Use

You will be provided with everything you need to run purifications, including pre-filled cartridges, specialized disposable tips and tubes. With the user-friendly interface and our user manuals, you are guaranteed to operate with ease.

Safety

MagCore® Automated Extraction System helps minimize cros-contamination by limiting hands-on procedures and turnaround time.

MagCore® System speeds the front-end processing, enabling you to do more tests in less time. And the Instrument is compact, so it can virtually fit into any lab.

Built-in Programs

All of our MagCore Extractor models have built-in protocols for all of the kits we offer. Simply run the protocol by selecting the 3-digit code printed on the kit of interest.

Free upgrade of software and protocols can be downloaded from our website (www.rbcbioscience.com) and uploaded through the instrument RS232 / USB ports.

Diverse Sample Purification

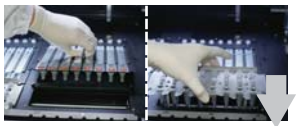
We offer extraction kits designed for Blood, Plasma, Cell, Tissue, FFPE Tissue and Plant samples, to fit all your research needs.

Competitive Price and Small Footprint

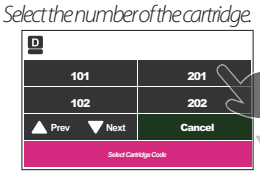
Easy To Use

Apply samples to instrument

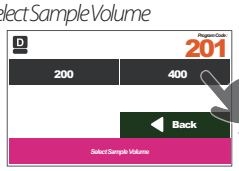
Load Accessories



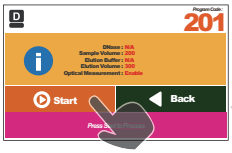
Select the number of the cartridge.



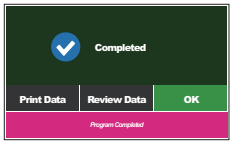
Select Sample Volume



Push Start



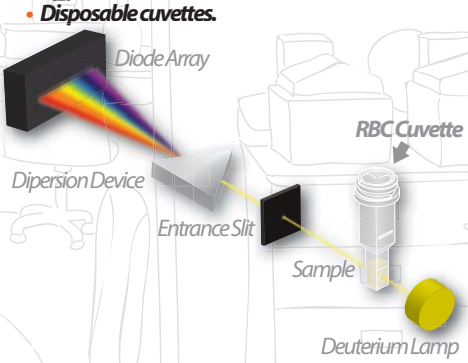
A Beep Sound can be heard after protocol is completed



Other Features

Automatic Optical Density Measurement

- ***Built-in spectrophotometer provides O.D. A_{260} and A_{280} measurement of individual samples. (O.D. detection range: ABS <6.)***
- ***A_{320} Normalization***
- ***Disposable cuvettes.***



Thermo Printer and Barcode Scanner

Progress Monitoring

Laboratory Information Management System (LIMS)

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
www.rbcbioscience.com
info@rbcbioscience.com

MagCore® Nucleic Acid Extraction Kits

MagCore® Automated Nucleic Acid Kits Selection Guide

		Cat No.	Cat No.	Cat No.	Cat No.	Whole Blood	Buffy Coat	Plasma/Serum	Cell-free body fluids	Urine	Free circulating DNA	Amniotic Fluid	Cultured Cells	Animal Tissue	Plant Tissue	Bacteria/Sputum	Swab	FFPE	Stool	Forensic Specimens
		24 preps	36 preps	72 preps	96 preps															
Genomic DNA	101 MagCore® Genomic DNA Whole Blood Kit (Speedy installation)		MGB400-01		MGB400-02	■	■													
	102 MagCore® Genomic DNA Whole Blood Kit		MGB400-03		MGB400-04	■	■													
	104 MagCore® Genomic DNA Large Volume Whole Blood Kit (1.2 ml)				MGB1200	■														
	105 MagCore® Plasma DNA Extraction Kit (1.2 ml)				MPD1200			■	■		■									
	115 MagCore® Circulating DNA large volume kit (3-4 ml)				Coming Soon			■	■		■									
	106 MagCore® Genomic DNA Whole Blood Kit (For Genotyping)		MGB400-07		MGB400-08	■														
	110 MagCore® Cultured Cells DNA Kit		MCC-01		MCC-02							■	■							
	301 MagCore® Genomic DNA Plant Kit		MGP-01		MGP-02										■					
	401 MagCore® Genomic DNA Tissue Kit		MGT-01		MGT-02									■			■	■	■	■
	405 MagCore® Genomic DNA FFPE One-Step Kit		MGF-01	MGF-03														■		
	406 MagCore® Forensic DNA Direct Kit			MFC-03													■			■
	502 MagCore® Genomic DNA Bacterial Kit		MBB-01		MBB-02											■				
Viral Nucleic Acids	201 MagCore® Viral Nucleic Acid Extraction Kit		MVN400-01		MVN400-02			■	■	■							■			
	202 MagCore® Viral Nucleic Acid Extraction Kit (Low PCR Inhibition)		MVN400-03		MVN400-04			■	■	■							■			
	203 MagCore® Viral nucleic acid extraction kit (high sensitivity)		MVN400-05		MVN400-06			■	■	■							■			
	210 MagCore® Viral Nucleic Acid Large Volume Extraction Kit (2.4 ml)				MVN2400			■	■	■							■			
	211 MagCore® Viral Nucleic Acid Large Volume Extraction Kit (1.2 ml)				MVN1200			■	■	■							■			
Total RNA	601 MagCore® Total RNA Whole Blood Kit		MRN-01		MRN-02	■														
	605 MagCore® Total RNA FFPE One-step Kit	MRF-01		MRF-03														■		
	610 MagCore® Total RNA Cultured Cells Kit		MRC-01		MRC-02								■							
	631 MagCore® triXact RNA Kit	MRX-01		MRX-03		■							■	■	■					

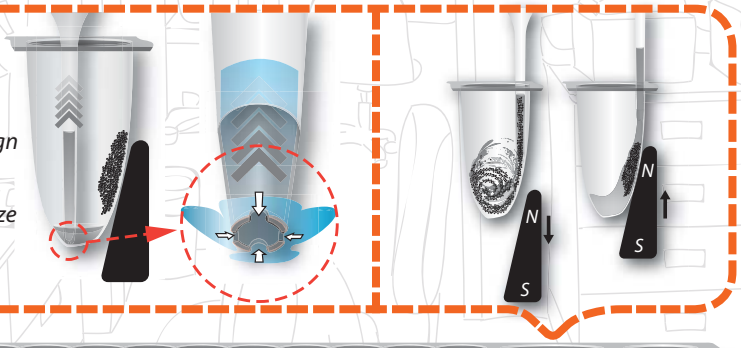
MagCore® Cartridge Design and Extraction Principle

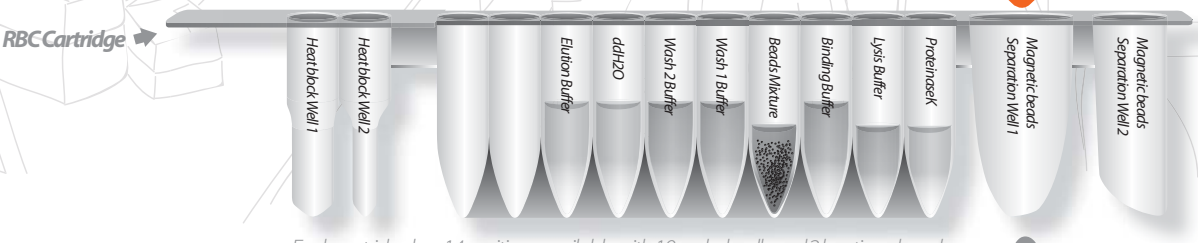
MagCore® cartridges include all reagents needed for purifications, no additional handling is necessary. We minimize any possible contamination and spillage with an automated piercing step for our pre-sealed cartridges. RBC patented Heating Well and Separation Well in the cartridge provide a strong circular force to ensure efficient binding and washing during the extraction procedure.

MagCore® Nucleic Acid Extraction Kits contain all reagents and consumables needed for 36, 72 or 96 nucleic acid isolation reactions. The consumables consist of reagent cartridges, individually packaged tip sets, sample tubes and elution tubes.

Tip Design

The unique cross-notch design at the end of the tips allows the instrument to pipette precise volumes and minimize liquid retention.



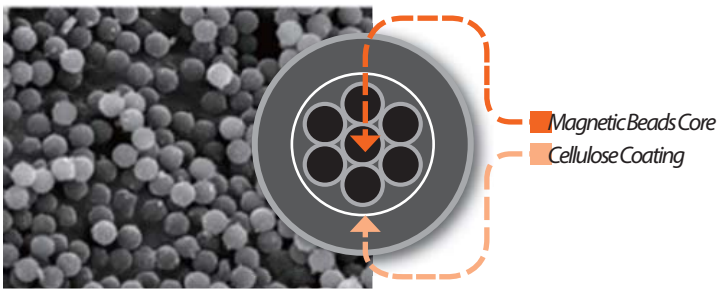


Each cartridge has 14 positions available with 10 sealed wells and 2 heating chambers.

Extraction Principle

MagCore® Worldwide Patented Magnetic Beads

Our design: multiple core inside, cellulose coating.



Particle range	~20µm (in water)
VSM	~40 emu/g
Cellulose w%	~50%
Core size	~150 nm
Core VSM	~80 emu/g
Core material	Fe_3O_4
Bead Binding capacity	1 mg beads bind ~300µg Calf thymus DNA ~350µg human placenta DNA

FDA CE IVD FC ISO 13485 SGS UKAS MANAGEMENT SYSTEMS 005

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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MagCore® Automated Nucleic Acid Extractor

Full traceability and mobile monitoring on your smartphone

MagCore® Plus II

MagCore Plus II is the newest robotic bench-top workstation for a fast and high-yield nucleic acid purification from virtually all molecular diagnostic, biological, clinical and forensic sample types. With small footprint, light weight, user friendly interface, and a broad range of entirely built-in programs with free upgrades, 1-16 samples can be isolated simultaneously at your fingertip. The instrument simplifies your daily routine providing full traceability of kits and samples, through real-time mobile monitoring and a complete report that can be downloaded on a computer at the end of each run.

Magnetic Beads

Worldwide Patented Magnetic Beads

Cellulose-coated magnetic beads, coupled with our patented binding and separation technology, guarantee high quality extracts.

DNA RNA

Ideal for both DNA/RNA extraction

Built-in protocols are created for extracting nucleic acids from a wide range of samples, including whole blood, plasma (circulating free nucleic acid), tissue, bacteria, virus, plant and forensic.

16 Sample

Throughput up to 16 samples per run

From cartridge piercing to final eluate, all steps are performed by the instrument, that allows running 1 to 16 samples at one time, for a time-saving and flexible performance.

LIMS

Full traceability of the samples and kits

A report in .csv format is generated at the end of each run and contains all relevant data: user's name, sample and kit barcode, protocol number, sample and elution volume, start and end time. The file, opened on a computer, can be subsequently processed by a LIMS.

Monitoring

Real-Time Mobile Monitoring

During the run, the instrument HMI can be accessed via Wi-Fi from your smartphone/tablet through our App, to see real-time information about the run processing status, remaining time and errors. Android and iOS compatible.

UV

UV Decontamination

The equipped UV lamp minimizes the risk of cross-contamination and ensures user and product safety.

Upgradeable via USB

Built-in Programs (Upgradeable via USB ports, Plug&Play)

MagCore® Plus II features built-in protocols for all the extraction kits we offer and is equipped with a USB port for free protocol and software upgrades.

Barcode Scanner

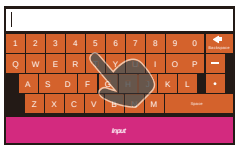
Barcode Scanner (optional)

For sample and kit tracking and monitoring and an easier organization of the test results.

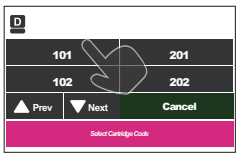
Easy To Use

Load Samples And Install Accessories

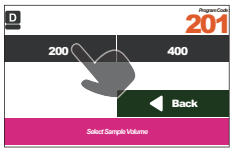
Input user's name



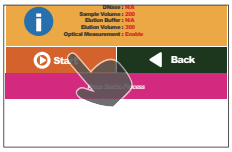
Select the code of the cartridge.



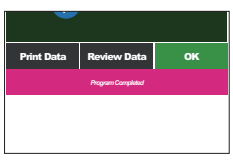
Select Sample Volume And Eluate Volume



Press Start

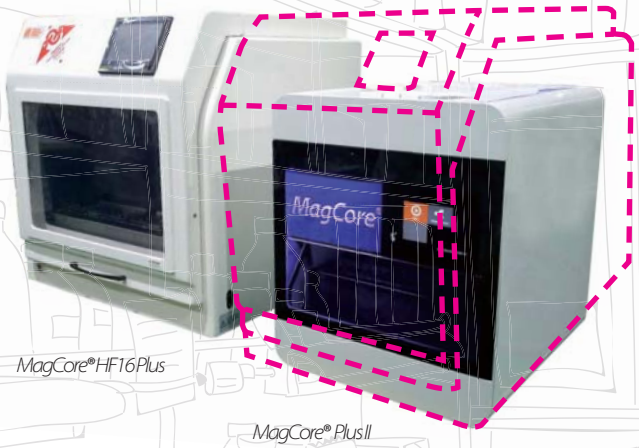


A Beep Sound can be heard when the program completes.



Open the run report on your computer

Same throughput, smaller size



MagCore® HF16 Plus

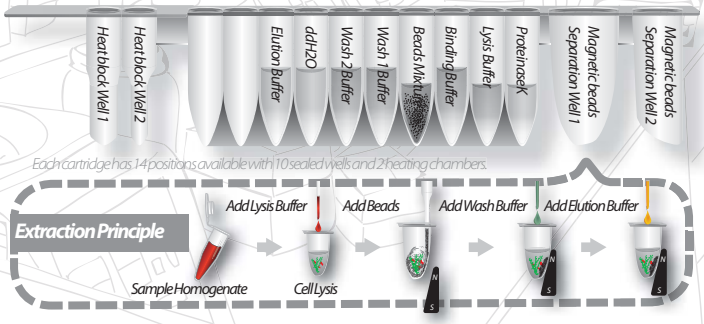
MagCore® Plus II

Barcode Scanner (optional)

Laboratory Information Management System (LIMS)

Unidirectional LIMS device, Ethernet cable

Cartridge Design and Extraction Principle



Mobile Monitoring with Android and iOS App

Specification

Model	Plus II
System Method	Cellulose coated magnetic beads
System Components	1. Pipetting Unit: X and Y-axis movement for sample transfer and dispense. 2. Electric Control: PLC module and ARM-based main board embedded in 3. UV Light: power 8w, life duration11,000hrs 4. Heating Block: RT-90°C 5. Display Screen: 7-inch color touch panel 6. Accessories: T-racks, cartridge racks , barcode scanner
Power Supply	Voltage: AC 100V~240V; Frequency: 50/60Hz
Dimension	W600 x D600 x H600 (mm) / W23.62 x D23.62 x H23.62 (inches)
Net Weight	70kg / 154.35lbs

Operating Paramenters

Processing Capacity	1-16 samples per batch
Processing Time	30-90 minutes (depends on ample type and method)
Sample Volume	200µl/400µl/1,200µl/ 3ml/4ml
Elution Volume	30µl/60µl/100µl/150µl/200µl
Yield	Average 6µg Genomic DNA from 200µl human whole blood
Purity	DNA : O.D $A_{260/280}$ ratio 1.8 ± 0.1 RNA : O.D $A_{260/280}$ ratio 2.0 ± 0.2
Pipetting Accuracy	500µl ≤ 4%

Operating Environment

Temperatures allowed during transportation, storage, and packaging	15℃-35℃
Temperatures allowed during operation	18℃ -30℃
Pollution Degree	Level 2

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
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MagCore® Automated Nucleic Acid Extractor

The first intrument with built-in Spectrophotometer

MagCore® Super

MagCore® Super is RBC Bioscience's most advanced and efficient automated workstation for nucleic acid extraction. It is the first platform to combine our Extractor and Spectrophotometer. Users can benefit from automated nucleic acid extraction and measurement of the OD value and concentration of the final eluate.

Automatic Optical Measurements of OD Values

Built-in spectrophotometer and our optical module provide users the option to automatically measure OD values and concentration of final eluates upon completion of the nucleic acid extraction process.

Test Report

Test results can be saved in the instrument, downloaded through he USB port and/or printed by the thermal printer.

USB Output (USB flash drive not provided)

USB Output allows users to conveniently save tests reports in excel format and upload system updates with a USB flash drive.

Thermal Printer

Test reports are available in hard copy.

Laboratory Information Management System (LIMS)

Test results are automatically saved after optical measurements. You can save up to 1,600 tests in LIMS. Data can be easily transferred to a printer or computer in the same network and the report file can be subsequently processed by a LIMS.

Worldwide Patented Magnetic Beads

Cellulose-coated magnetic beads, coupled with our patented binding and separation technology, guarantee high quality extracts.

Ideal for both DNA/RNA Extraction

Built-in protocols are created for extracting nucleic acids from whole blood, plasma, tissue cell, plant cell, bacteria cell and virus samples.

UV Decontamination

The equipped UV lamp minimizes the risk of cross-contamination and ensures user and product safety.

High Capacity of 16 Samples

The instrument and protocols allow running up to 16 samples at one time, providing time-saving and flexible operation.

Built-in Programs (Upgradeable via USB ports, Plug&Play)

MagCore Super has built-in protocols for all of the extraction kits we offer. Simply run the protocol by selecting the 3-digit code printed on the kit of interest. MagCore® is equipped with a USB port. Free upgrade of software or protocols can be downloaded from our website (www.rbcbioscience.com).

Touch Screen with User-Friendly Interface

An integrated 7-inch full-color touch screen with user-friendly interface offers ease in operation. Only one touch is required to run your daily work.

Barcode Scanner

It enables sample tracking and monitoring throughout the entire purification process and helps organize test results.

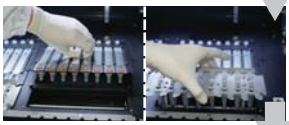
Progress Monitoring

Remote (wireless) HMI device automatically transfers the data to your Android smartphone.

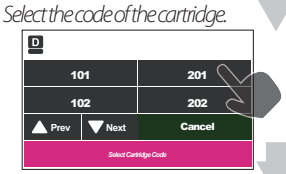
Easy To Use

Load Samples

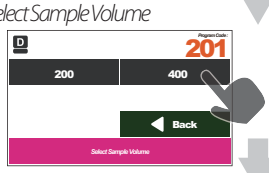
Install Accessories



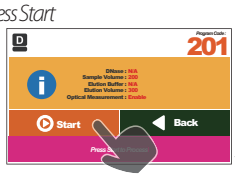
Select the code of the cartridge.



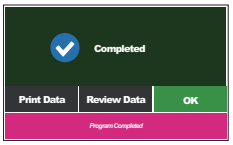
Select Sample Volume

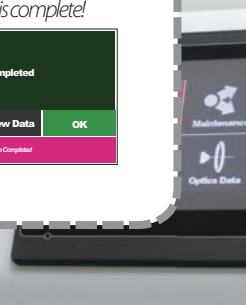


Press Start

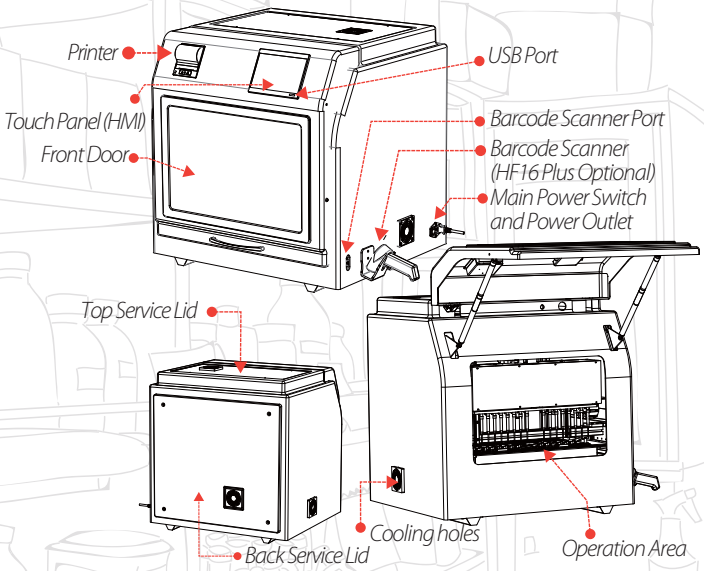


A Beep Sound can be heard after the program is complete!



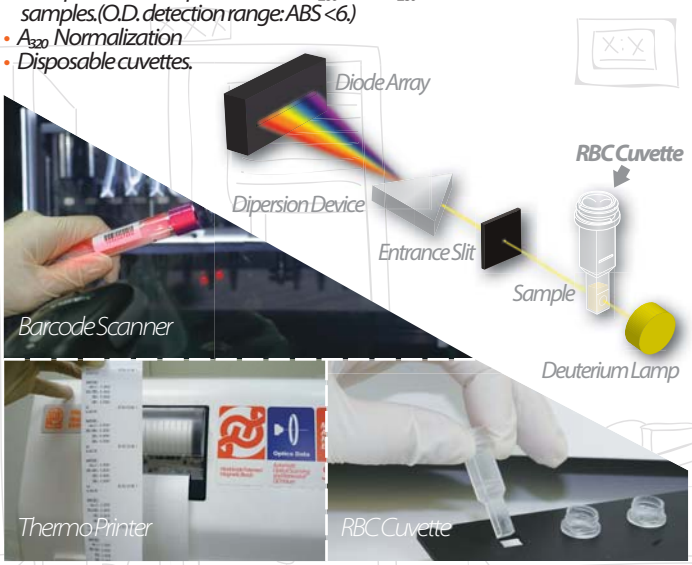


MagCore® Super System Overview

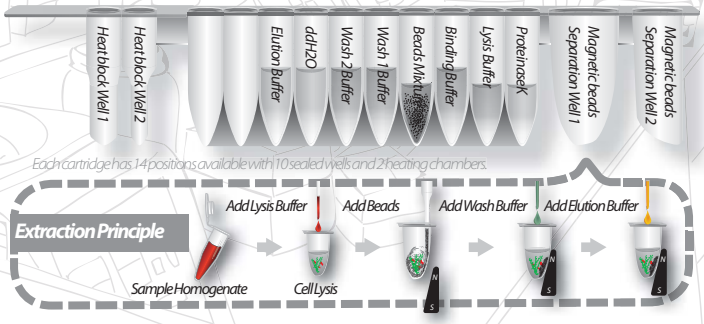


Automatic Optical Scanning and Retrieval of OD Values

- The optical module provides O.D. A_{260} and A_{280} measurement of individual samples.(O.D. detection range: ABS <6.)
- A_{320} Normalization
- Disposable cuvettes.

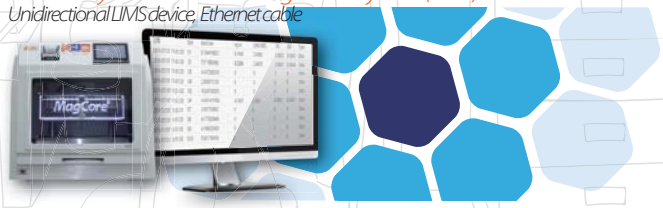


Cartridge Design and Extraction Principle



Laboratory Information Management System (LIMS)

Unidirectional LIMS device, Ethernet cable



Process Monitoring

(Wireless - Android Only) (optional)

Specification

Model	Super
System Method	Cellulose coated magnetic beads
System Components	1. Pipetting Unit: X and Y-axis movement for sample transfer and dispense. 2. Electric Control: PLC module and ARM-based main board embedded in 3. UV Light: power 8w, life duration 11,000hrs 4. Heating Block: RT-90°C 5. OD Detection Range: ABS 0 -2.5 6. Detection Source: D2 lamp 7. Detection Wavelength: 260nm, 280nm 8. Display Screen: 7-inch color touch panel 9. Accessories: T-racks, cartridge racks , cuvette racks, barcode scanner, thermal printer
Power Supply	Voltage: AC 100V~ 240V; Frequency: 50/60Hz
Dimension	W760 x D700 x H770 (mm) / W29.92 x D27.55 x H30.31 (inches)
Net Weight	78kg / 171.99lbs

Operating Paramenters

Processing Capacity	1-16 samples per batch
Processing Time	30-90 minutes (depends on ample type and method)
Sample Volume	200µl/400µl/1,200µl
Elution Volume	30µl/60µl/100µl/150µl/200µl
Yield	Average 6µg Genomic DNA from 200µl human whole blood
Purity	DNA : O.D $A_{260/280}$ ratio 1.8 ± 0.1 RNA : O.D $A_{260/280}$ ratio 2.0 ± 0.2
Pipetting Accuracy	500µl ≤ 4%

Operating Environment

Temperatures allowed during transportation, storage, and packaging	15°C-35°C
Temperatures allowed during operation	18°C -30°C
Pollution Degree	Level 2

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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MagCore® Automated Nucleic Acid Extractor

Most popular with high CP value

MagCore® HF16 Plus

MagCore® HF16 Plus is the 2nd generation of HF16 with brand new mechanical design and improved program efficiency. With a user friendly design and built-in programs, up to 16 samples can be processed at your fingertip. CE-IVDD certificated reagent kits available for various samples of whole blood, serum, plasma, body fluids, bacteria, plant, cultured cells, tissues, and viruses. Optional barcode scanner available upon request.

Worldwide Patented Magnetic Beads

Magnetic Beads

Cellulose-coated magnetic beads, coupled with our patented binding and separation technology, guarantee high quality extracts.

Ideal for both DNA/RNA Extraction

DNA RNA

Built-in protocols are created for extracting nucleic acids from whole blood, plasma, tissue cell, plant cell, bacteria cell and virus samples.

UV Decontamination

UV

The equipped UV lamp minimizes the risk of cross-contamination and ensures user and product safety.

High Capacity of 16 Samples

16 Sample

The instrument and protocols allow running up to 16 samples at one time, providing time-saving and flexible operation.

Built-in Programs (Upgradeable via USB ports, Plug&Play)

Upgradeable via USB

MagCore® HF16 Plus has built-in protocols for all of the extraction kits we offer. Simply run the protocol by selecting the 3-digit code printed on the kit of interest.

MagCore® is equipped with a USB port. Free upgrade of software or protocols can be downloaded from our website (www.rbcbioscience.com).

Touch Screen with User Friendly Interface

Touch Screen

An integrated 7-inch full-color touch screen with user-friendly interface offers ease in operation. Only one touch is required to run your daily work.

Barcode Scanner (optional)

Barcode Scanner

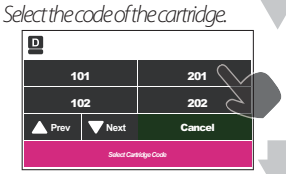
It enables sample tracking and monitoring throughout the entire purification process and helps organize test results.

Easy To Use

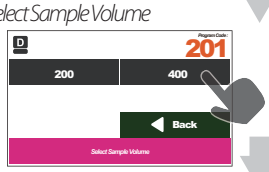
Load Samples

Install Accessories

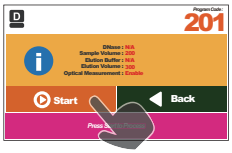
Select the code of the cartridge.



Select Sample Volume

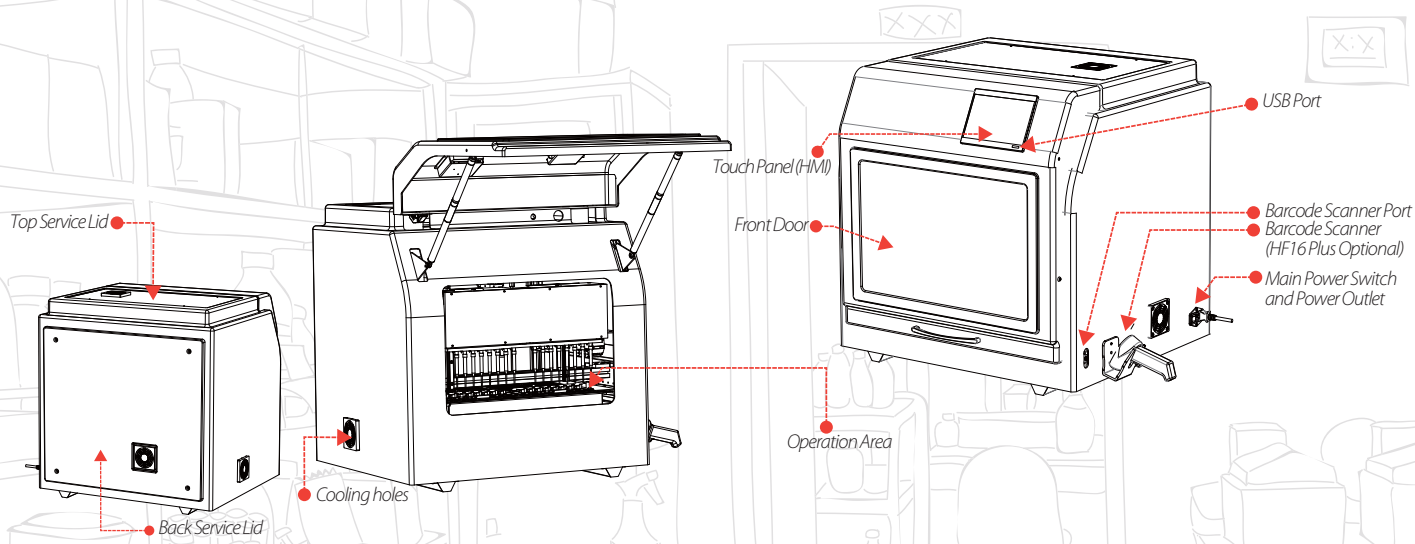


Press Start

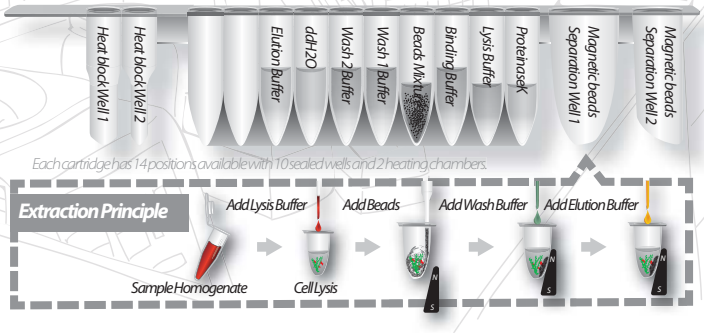


A Beep Sound can be heard when the program completes.

MagCore® HF16 Plus System Overview



Cartridge Design and Extraction Principle



Specification

Model	HF16 Plus
System Method	Cellulose coated magnetic beads
System Components	1. Pipetting Unit: X and Y-axis movement for sample transfer and dispense. 2. Electric Control: PLC module and ARM-based main board embedded in. 3. UV Light: Power 8W, life duration 11,000 Hrs . 4. Heating Block: RT~90° C . 5. Display Screen: 7 inch colored touch panel . 6. Accessories: T - Rack, Cartridge Rack. Barcode Scanner (optional)
Power Supply	Voltage: AC 100V~ 240V; Frequency: 50/60Hz
Dimension	W760 x D700 x H770 (mm) / W29.92 x D27.55 x H30.31 (inches)
Net Weight	70kg / 154.35lbs

Operating Paramenters

Processing Capacity	1-16 samples per batch
Processing Time	30-90 minutes (depends on sample type and method)
Sample Volume	200 µl/400 µl/1,200 µl
Elution Volume	30µl/60µl/100µl/150µl/200 µl
Yield	Average 6µg Genomic DNA from 200µl human whole blood
Purity	DNA : O.D $A_{260/280}$ ratio 1.8 ± 0.1 RNA : O.D $A_{260/280}$ ratio 2.0 ± 0.2
Pipetting Accuracy	500µl ≤ 4%

Operating Environment

Temperatures allowed during transportation, storage, and packaging	15℃-35℃
Temperatures allowed during operation	18℃-30℃
Pollution Degree	Level 2

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
www.rbcbioscience.com
info@rbcbioscience.com

MagCore® Automated Nucleic Acid Extractor

High-throughputChannel
MagCore® HF48

MagCore® HF48 is a powerful system that can simultaneously process up to 48 samples with stability and consistency. It provides fast and cost-effective automated purification of nucleic acids from diverse sample types. It can be coupled with our extraction kits for whole blood, plasma, bacteria cell, cultured cell, virus and tissue samples. With a built-in sterilization system, pre-programmed and optimized protocols, and our patented magnetic bead technology, MagCore HF48 can deliver quality and efficient nucleic acid purification. It is the perfect solution for users with higher throughput needs for nucleic acid extraction.

Worldwide Patented Magnetic Beads
Cellulose-coated magnetic beads, coupled with our patented binding and separation technology, guarantee high quality extracts.

Ideal for both DNA/RNA Extraction
Built-in protocols are created for extracting nucleic acids from whole blood, plasma, tissue cell, plant cell, bacteria cell and virus samples.

UV Decontamination
The equipped UV lamp minimizes the risk of cross-contamination and ensures user and product safety.

High Capacity of 48 Samples
Two 24-sample modules provide more flexibility and time-saving operation and allow running up to 48 samples at one time

Built-in Programs *(Upgradeable via USB ports, Plug&Play)*
MagCore® HF48 has built-in protocols for most of the extraction kits we offer. Simply run the protocol by inputting the 3-digit code printed on the kit of interest.

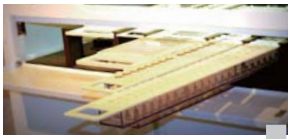
MagCore® is equipped with a USB port. Free upgrade of software or protocols can be downloaded from our website (www.rbcbioscience.com).

Touch Screen with User Friendly Interface
An integrated 8.9-inch full-color touch screen with user-friendly interface offers ease in operation. Only one touch is required to run your daily works.

Barcode Scanner *(optional)*
It enables sample tracking and monitoring throughout the entire purification process and helps organize test results.

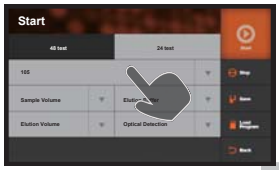
Easy To Use

Load Samples

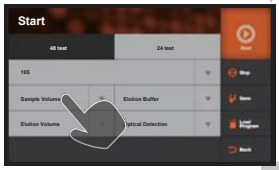


Install Accessories

Select the code of the cartridge.



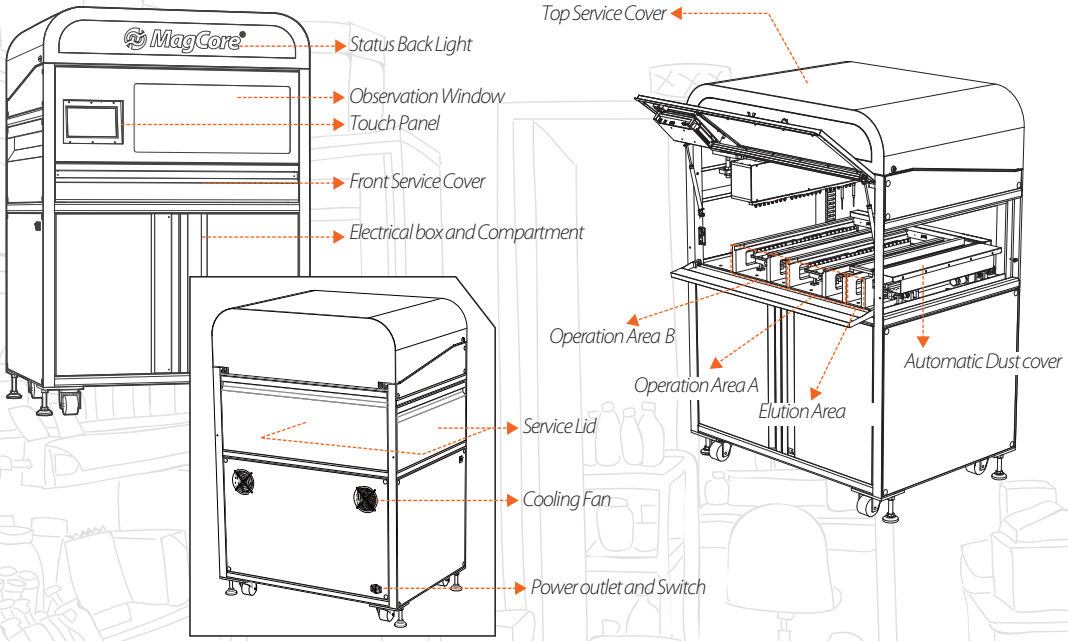
Select Sample Volume



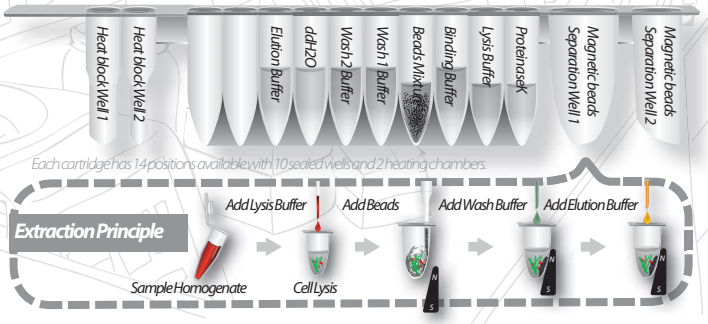
Press Start

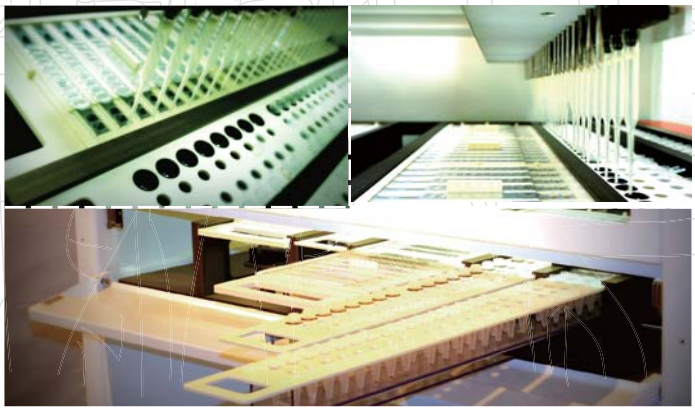
Completie in 30 to 90 minutes!

MagCore® HF48 System Overview



Cartridge Design and Extraction Principle





Specification

Model	HF48
System Method	Cellulose coated magnetic beads
System Components	1. Pipetting Unit: X and Y-axis movement for sample transfer and dispense. 2. Special designs of the cartridge rack, T-rack, and tube rack for an easy installation. 3. Auto-cartridge locking. 4. Electric Control: Internal microprocessor. 5. 8.9-inch full-color touch screen. 6. Accessories: T- Rack, Cartridge Rack , Tube Rack.
Power Supply	Voltage: AC 200V~220V; Frequency: 50/60Hz;
Dimension	W1000 x D800 x H1600 (mm) / W39.37 X D31.49X H62.99 (inches)
Net Weight	250kg / 551.25Lb
Available Program	101, 102, 104, 105, 106, 201, 202, 211, 401, 502, 601, 610

Operating Paramenters

Processing Capacity	1~48 samples per batch
Processing Time	30-90 minutes (depends on sample type and method)
Sample Volume	200 µl/400 µl/1,200 µl
Elution Volume	60µl/100µl/150µl/200 µl
Yield	Average 6µg Genomic DNA from 200µl human whole blood
Purity	DNA : O.D $A_{260/280}$ ratio 1.8 ± 0.1 RNA : O.D $A_{260/280}$ ratio 2.0 ± 0.1
Pipetting Accuracy	500µl ≤ 4%

Operating Environment

Temperatures allowed during transportation, storage, and packaging	15℃-35℃
Temperatures allowed during operation	18℃-30℃
Pollution Degree	Level 2

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
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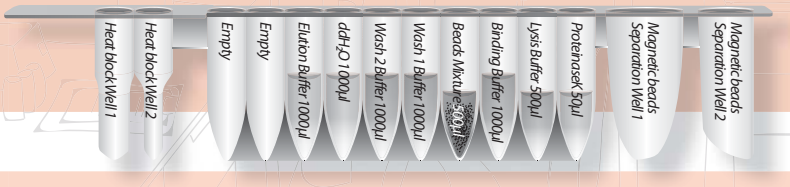
MagCore® Nucleic Acid Extraction Kits

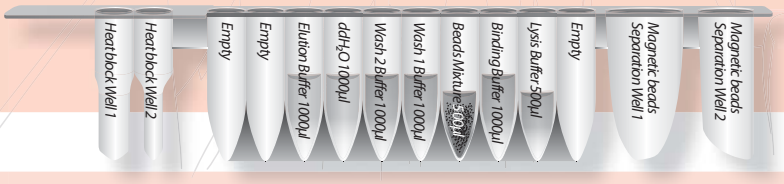
For extraction of genomic DNA from human whole blood sample

MagCore® Genomic DNA Whole Blood Kit is designed for extraction of total DNA (including genomic, mitochondrial and viral DNA) from whole blood, plasma, serum and buffy coat. The pre-filled cartridge contains proteinase K, a chaotropic salt, and guanidine hydrochloride for cell lysis and protein degradation. They enhance the binding between cellulose-coated magnetic beads and DNA. High quality DNA is eluted by low salt elution buffer or water after the removal of contaminants. Purified DNA of approximately 20-30 kb is suitable for PCR or other downstream applications.

101 MagCore® Genomic DNA Whole Blood Kit (Speedy installation)



102 MagCore® Genomic DNA Whole Blood Kit



104 MagCore® Genomic DNA Large Volume Whole Blood Kit (1.2 ml)

106 MagCore® Genomic DNA Whole Blood Kit (For Genotyping)

Features

1. *High performance of purified DNA in downstream applications such as qPCR.*
2. *High analytical sensitivity*
3. *Cartridges are pre-filled and sealed to prevent contamination.*
4. *Walkaway processing improves work efficiency.*

Applications

The MagCore® Genomic DNA Whole Blood Kit is designed to allow automated processing of multiple sample types in the same run. Sample types include:

1. *Fresh and frozen whole blood*
2. *Buffy coat*
3. *Body fluids*

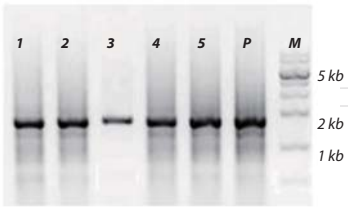
High quality DNA available for various downstream applications, including:

1. *PCR and real time PCR*
2. *Genotyping or sequencing*
3. *SNP, STR*

Performance

DNA quality unaffected by anticoagulants

Anticoagulant	$A_{260}/_{280}$	Conc.(ng/μl)
1. EDTA	1.87	99.3
2. Sodium Citrate	1.87	86.1
3. Lithium Heparin(4ml)	1.95	106.02
4. Sodium Fluoride	1.91	113.16
5. Lithium Heparin(9ml)	1.95	101.34

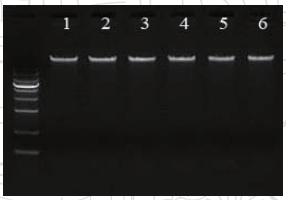


Consistent yield and purity

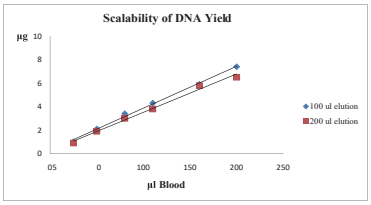
It is shown that there is a scalability of DNA isolation from blood samples (20, 50, 80, 100, 150, and 200 μl) by the MagCore® HF16 The amount of DNA was determined by A_{260} measurement.

Kbps

10



Linear Increase in DNA yield



MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super/HF16 Plus/Plus II				MagCore® HF16/Compact/HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
101	**MagCore® Genomic DNA Whole Blood Kit (Speedy installation)** For 200 and 400 μl sample volumes. Contents: Pre-Filled Cartridges (Including Proteinase K), Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 12 months							
	MGB400-01		MGB400-02	39 min (sample volume:200 μl) 50 min (sample volume:400 μl)	MGB400-01		MGB400-02	44 min (sample volume:200 μl) 57 min (sample volume:400 μl)
102	**MagCore® Genomic DNA Whole Blood Kit** For 200 and 400 μl sample volumes. Contents: Pre-Filled Cartridges (Including Proteinase K), Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
	MGB400-03		MGB400-04	39min (sample volume:200 μl) 50min (sample volume:400 μl)	MGB400-03		MGB400-04	44 min (sample volume:200 μl) 55 min (sample volume:400 μl)
104	**MagCore® Genomic DNA Large Volume Whole Blood Kit (1.2 ml)** For 1200 μl sample volumes. Contents: Pre-Filled Cartridges (Including Proteinase K), Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
			MGB1200	76 min (sample volume:1200 μl)			MGB1200	83 min (sample volume:1200 μl)
106	**MagCore® Genomic DNA Whole Blood Kit (For Genotyping)** For 200 and 400 μl sample volumes. Contents: Pre-Filled Cartridges (Including Proteinase K), Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
	MGB400-07		MGB-400-08	41 min (sample volume:200 μl) 53 min (sample volume:400 μl) *optical detection is not provided	MGB400-07		MGB-400-08	44 min(sample volume:200 μl) 57 min(sample volume:400 μl) (Applicable models:HF16, Compact)

Enzyme Selection Guide

Product	Contents	Cat.No.
Proteinase K Set	11 mg Proteinase K,1.25 ml PK Storage Buffer	PK011
RNase A	50 μl RNase A (50mg/ml)	RN050
	130 μl RNase A (50mg/ml)	RN130

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
www.rbcbioscience.com
info@rbcbioscience.com

MagCore® Nucleic Acid Extraction Kits

For extraction of free circulating DNA from human plasma or serum

MagCore® Plasma DNA Extraction Kit is designed for purifying free circulating DNA from human serum or plasma using MagCore® automated extraction systems. The kit contains all required reagents and labware for automated purification based on magnetic-particle technology. Reagents necessary for a complete process are supplied and pre-filled in the cartridges, which can be easily loaded into the MagCore® instrument.

105

MagCore® Plasma DNA Extraction Kit (1.2 ml)

Features

1. High performance of purified DNA in downstream applications such as qPCR.
2. Efficient recovery of fragmented DNA
3. Pre-filled and sealed buffer cartridges prevent contamination.
4. No phenol or chloroform extraction
5. Efficient removal of contaminants and inhibitors.

Applications

The MagCore® Plasma DNA Extraction Kit efficiently purifies free circulating DNA.
Sample types include:

1. Human plasma
2. Human serum

High quality DNA available for various downstream applications, including:

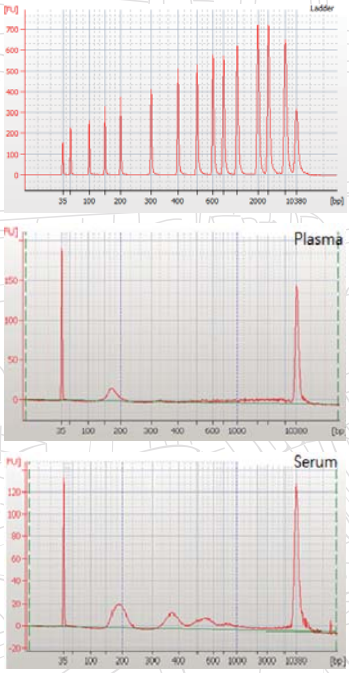
1. PCR and real-time PCR
2. Next Generation Sequencing (NGS)

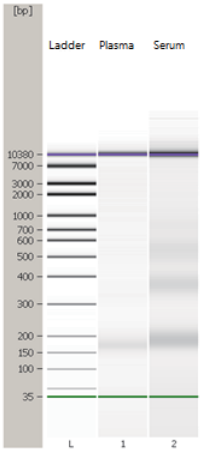
Performance

High-quality of free DNA from plasma and serum

Quality and quantity analysis of the free DNA by Agilent Bioanalyzer 2100. Superior quality DNA are available from plasma and serum samples by using MagCore® products.

Sample ID	Sample type	Target Conc. (pg/µl)	35 bp marker Conc. (pg/µl)	10380 bp marker Conc. (pg/µl)
1	Human plasma	77.94	125	75
2	Human serum	138.48	125	75

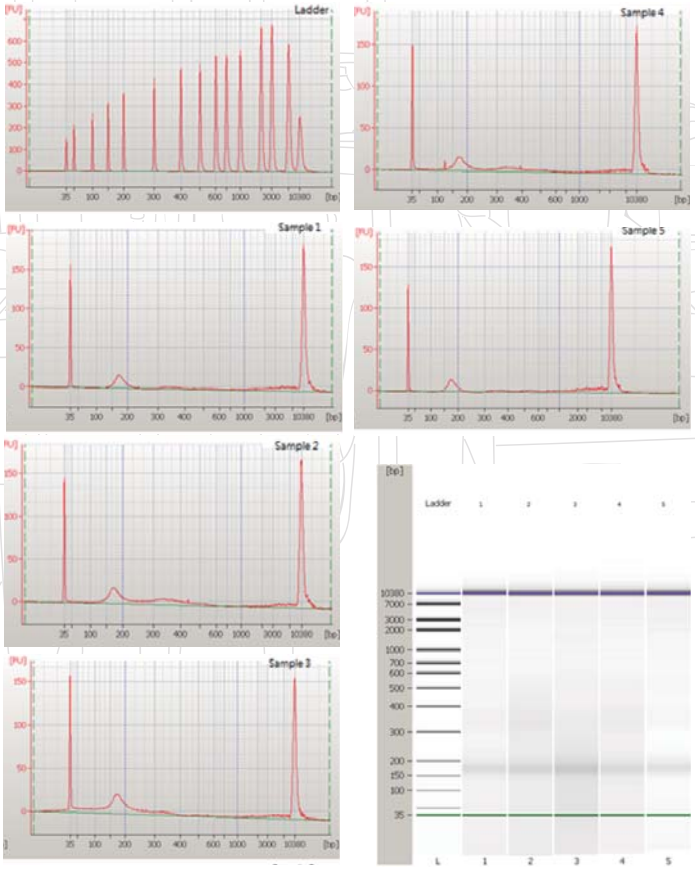




High stability of free DNA

Quality and quantity analysis of the free DNA by Agilent 2100 Bioanalyzer.It is shown by the evidence that free DNA of high quality and stability is possible to extract from 5 different plasma samples by using MagCore® procudts.

Sample ID	Sample type	Target Conc.(pg/µl)	35 bp marker onc. (pg/µl)	10380 bp marker Conc. (pg/µl)
1	Human plasma	65.95	125	75
2	Human plasma	76.63	125	75
3	Human plasma	87.22	125	75
4	Human plasma	57.96	125	75
5	Human plasma	60.53	125	75



MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super/HF16 Plus/Plus II				MagCore® HF16 /Compact/HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
105 MagCore® Plasma DNA Extraction Kit (1.2 ml) For 1200µl sample volumes. Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months			MPD1200	74 min (sample volume:1200 µl) *optical detection is not provided			MPD1200	70 min (sample volume:1200 µl)

Enzyme Selection Guide

Product	Contents	Cat.No.
Proteinase K Set	11 mg Proteinase K,1.25 ml PK Storage Buffer	PK011
RNase A	50 µl RNase A (50mg/ml)	RN050
	130 µl RNase A (50mg/ml)	RN130

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Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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info@rbcbioscience.com

MagCore® Nucleic Acid Extraction Kits

For extraction of free circulating DNA from human plasma or serum

MagCore® Plasma DNA Extraction Kit is designed for purifying free circulating DNA from human serum or plasma using MagCore® automated extraction systems. The kit contains all required reagents and labware for automated purification based on magnetic-particle technology. Reagents necessary for a complete process are supplied and pre-filled in the cartridges, which can be easily loaded into the MagCore® instrument.

105

MagCore® Plasma DNA Extraction Kit (1.2 ml)

Features

1. High performance of purified DNA in downstream applications such as qPCR.
2. Efficient recovery of fragmented DNA
3. Pre-filled and sealed buffer cartridges prevent contamination.
4. No phenol or chloroform extraction
5. Efficient removal of contaminants and inhibitors.

Applications

The MagCore® Plasma DNA Extraction Kit efficiently purifies free circulating DNA.
Sample types include:

1. Human plasma
2. Human serum

High quality DNA available for various downstream applications, including:

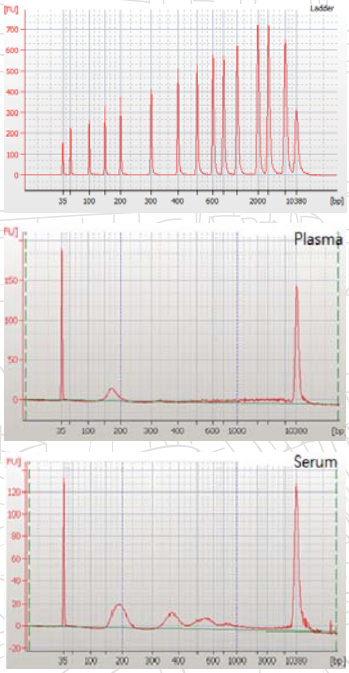
1. PCR and real-time PCR
2. Next Generation Sequencing (NGS)

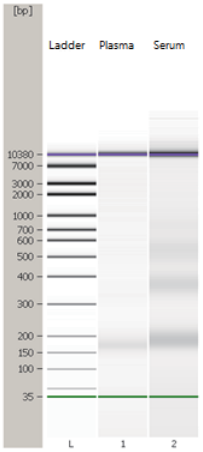
Performance

High-quality of free DNA from plasma and serum

Quality and quantity analysis of the free DNA by Agilent Bioanalyzer 2100. Superior quality DNA are available from plasma and serum samples by using MagCore® products.

Sample ID	Sample type	Target Conc. (pg/µl)	35 bp marker Conc. (pg/µl)	10380 bp marker Conc. (pg/µl)
1	Human plasma	77.94	125	75
2	Human serum	138.48	125	75

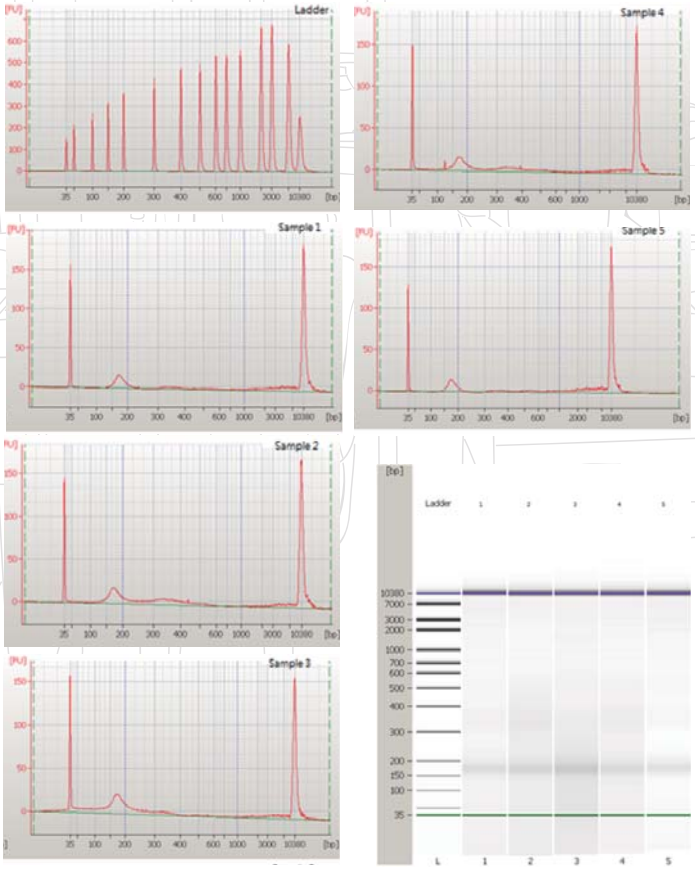




High stability of free DNA

Quality and quantity analysis of the free DNA by Agilent 2100 Bioanalyzer.It is shown by the evidence that free DNA of high quality and stability is possible to extract from 5 different plasma samples by using MagCore® procudts.

Sample ID	Sample type	Target Conc.(pg/µl)	35 bp marker onc. (pg/µl)	10380 bp marker Conc. (pg/µl)
1	Human plasma	65.95	125	75
2	Human plasma	76.63	125	75
3	Human plasma	87.22	125	75
4	Human plasma	57.96	125	75
5	Human plasma	60.53	125	75



MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super/HF16 Plus/Plus II				MagCore® HF16 /Compact/HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
105 MagCore® Plasma DNA Extraction Kit (1.2 ml) For 1200µl sample volumes. Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months			MPD1200	74 min (sample volume:1200 µl) *optical detection is not provided			MPD1200	70 min (sample volume:1200 µl)

Enzyme Selection Guide

Product	Contents	Cat.No.
Proteinase K Set	11 mg Proteinase K,1.25 ml PK Storage Buffer	PK011
RNase A	50 µl RNase A (50mg/ml)	RN050
	130 µl RNase A (50mg/ml)	RN130

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Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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www.rbcbioscience.com
info@rbcbioscience.com

MagCore® Nucleic Acid Extraction Kits

For extraction of cf DNA from 4ml plasma or serum

MagCore® Circulating DNA large volume kit is designed for purifying free circulating DNA from human serum or plasma using MagCore® automated extraction systems. The kit contains all required reagents and labware for automated purification based on magnetic-particle technology. Reagents necessary for a complete process are supplied and pre-filled in the cartridges, which can be easily loaded into the MagCore® instrument.

115 ***MagCore® Circulating DNA large volume kit (4ml)***

Features

1. High performance of purified DNA in downstream applications such as qPCR.
2. Efficient recovery of fragmented DNA
3. Pre-filled and sealed buffer cartridges prevent contamination.
4. No phenol or chloroform extraction
5. Efficient removal of contaminants and inhibitors.

Applications

The MagCore® Plasma DNA Extraction Kit efficiently purifies free circulating DNA.
Sample types include:

1. Human plasma
2. Human serum

High quality DNA available for various downstream applications, including:

1. PCR and real-time PCR
2. Next Generation Sequencing (NGS)

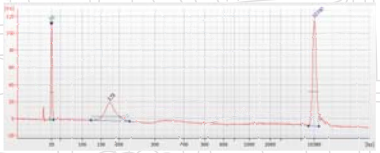
Performance

High stability of free DNA

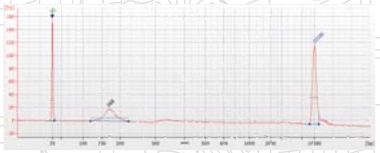
Quality and quantity analysis of the free DNA by Agilent 2100 Bioanalyzer.It is shown by the evidence that free DNA of high quality and stability is possible to extract from 5 different healthy people plasma samples by using MagCore procudts.

Sample ID	Sample type	Plasma (ml)	Qubit (ng/μl)	Ct value (GAPDH gene)	Bioanalyzer Conc. (pg/μl)	35 bp marker Conc. (pg/μl)	10380 bp marker Conc. (pg/μl)
1	Human plasma	4	0.262	18.52	127.21	125	75
2	Human plasma	4	0.250	18.59	124.62	125	75
3	Human plasma	4	0.220	18.78	111.11	125	75
4	Human plasma	4	0.290	18.45	153.24	125	75
5	Human plasma	4	0.278	18.49	130.97	125	75

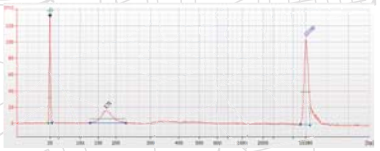
Sample 1



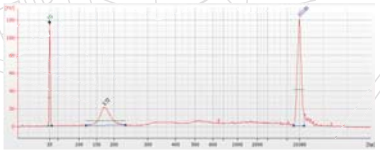
Sample 2



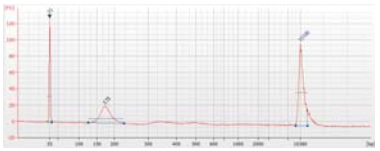
Sample 3



Sample 4



Sample 5



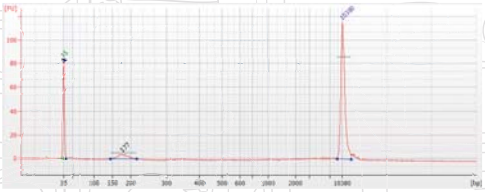
Comparison of free DNA from 1.2 ml and 4 ml plasma

Quality and quantity analysis of the free DNA by Agilent Bioanalyzer 2100. Superior quality DNA are available from plasma samples by using MagCore products.

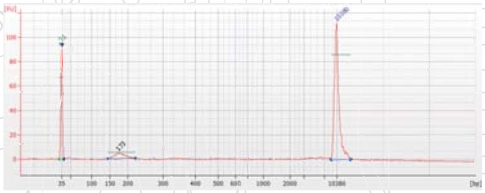
Sample ID	Kits Code	Sample type	Plasma (ml)	Qubit (ng/μl)	Ct value (GAPDH gene)	Bioanalyzer (pg/μl)	35 bp marker Conc. (pg/μl)	10380 bp marker Conc. (pg/μl)
1	105	Human plasma	1.2	0.061	23.86	24.70	125	75
2	105	Human plasma	1.2	0.058	23.96	22.98	125	75
3	115	Human plasma	4	0.203	20.04	117.0	125	75
4	115	Human plasma	4	0.194	20.26	104.7	125	75

Code 105: MagCore® Plasma DNA Extraction Kit
Code 115: MagCore® Circulating DNA large volume kit

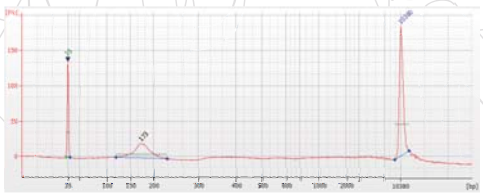
Sample 1



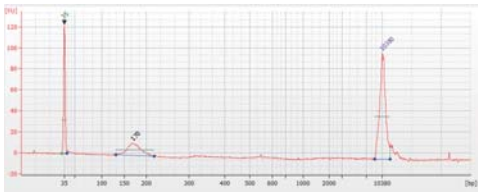
Sample 2



Sample 3



Sample 4



MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II				MagCore® HF16 / Compact			
	Cat No. 24 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 24 preps	Cat No. 72preps	Cat No. 96preps	Running Time
115 MagCore® Circulating DNA large volume kit For 4000μl sample volumes Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months	MPD4000-01	—	MPD4000-03	146 min (sample volume:4000 μl) *optical detection is not provided	MPD4000-01	—	MPD4000-03	146 min (sample volume:4000 μl)

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
RNase A	50 μl RNase A (50mg/ml)	RN050
	130 μl RNase A (50mg/ml)	RN130

FDA CE IVD FC ISO 13485 SGS UKAS MANAGEMENT SYSTEMS 005

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RBC Bioscience Corp.
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MagCore® Nucleic Acid Extraction Kits

For extraction of viral DNA/RNA from serum, plasma and cell-free body fluids

The MagCore® Viral Nucleic Acid Extraction Kit is designed for purifying viral DNA and RNA from serum, plasma, and cell free body fluids. MagCore® magnetic particle technology delivers high-quality DNA/RNA that is suitable for direct use in downstream applications such as amplification or other enzymatic reactions. To minimize the risk of cross-contamination, plastic consumables inside the Kit are DNase/RNase treated and the operation system is designed to individually process samples at the same time. Multiple protocols are installed on the instrument and optimized for different sample volumes.

201 MagCore® Viral Nucleic Acid Extraction Kit

202 MagCore® Viral Nucleic Acid Extraction Kit (Low PCR Inhibition)

210 MagCore® Viral Nucleic Acid Large Volume Extraction Kit (2.4 ml)

211 MagCore® Viral Nucleic Acid Large Volume Extraction Kit (1.2 ml)

Features

1. High performance of purified DNA in downstream applications such as qPCR.
2. High analytical sensitivity.
3. Cartridges are pre-filled and sealed to prevent contamination.
4. Walkaway processing improves work efficiency..

Applications

MagCore® Viral Nucleic Acid Extraction Kit is designed to allow automated processing of multiple sample types in the same run. Sample types include:

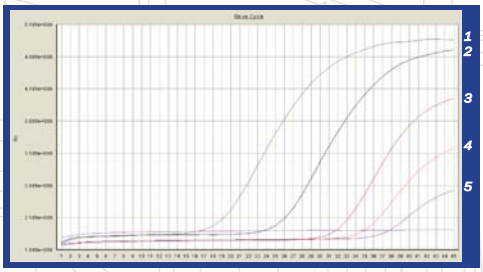
1. Cell-free body fluids
2. Plasma and serum
3. CSF
4. Urine

MagCore®

Performance

HBV detection by Real-Time PCR

The isolations of HBV nucleic acid from samples containing different concentrations of HBV were subsequently detected by Real-Time PCR



Sensitivity test for HBV detection

Lane 1	$1x10^0$ HBV serums.
Lane 2	$1x10^1$ HBV serums.
Lane 3	$1x10^2$ HBV serums.
Lane 4	$1x10^3$ HBV serums.
Lane N	Negative control.
Lane M	RBC 100 bp DNA Ladder Marker.

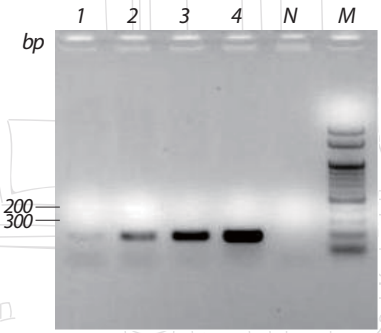


Figure 1. Nested PCR results of HBV at different concentrations. Viral nucleic acids were purified from samples containing different amount of HBV using MagCore® Viral Nucleic Acid Extraction Kit.

Sensitivity test for HCV detection

Lane 1	$5x10^0$ HCV serums.
Lane 2	$5x10^1$ HCV serums.
Lane 3	$5x10^2$ HCV serums.
Lane 4	$5x10^3$ HCV serums.
Lane 5	$5x10^4$ HCV serums.
Lane 6	$5x10^5$ HCV serums.
Lane P	Positive control.
Lane N	Negative control.
Lane M	RBC 100 bp DNA Ladder Marker.

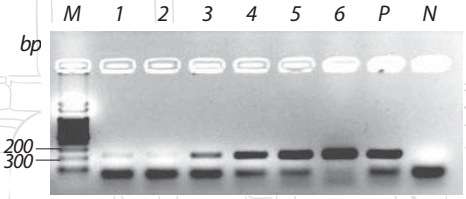


Figure 2. Nested PCR results of HCV at different concentrations. Viral nucleic acids were purified from samples containing different amount of HCV using MagCore® Viral Nucleic Acid Extraction Kit.

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II				MagCore® HF16 / Compact / HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
201	*MagCore® Viral Nucleic Acid Extraction Kit* *For 200 and 400 µl sample volumes.* *Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Carrier RNA, Rnase Free Water, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes* *Shelf life: 18 months*							
	MVN400-01		MVN400-02	44 min (sample volume:200 µl) 55 min (sample volume:400 µl) *optical detection is not provided	MVN400-01		MVN400-02	45 min (sample volume:200 µl) 56 min (sample volume:400 µl) (Applicable models: HF16, Compact)
202	*MagCore® Viral Nucleic Acid Extraction Kit (Low PCR Inhibition)* *For 200 and 400 µl sample volumes.* *Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Carrier RNA, Rnase Free Water, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes* *Shelf life: 18 months*							
	MVN400-03		MVN-400-04	62 min (sample volume:200 µl) 73 min (sample volume:400 µl) *optical detection is not provided	MVN400-03		MVN400-04	57 min (sample volume:200 µl) 66 min (sample volume:400 µl)
210	*MagCore® Viral Nucleic Acid Large Volume Extraction Kit (2.4 ml)* *For 2400 µl sample volumes.* *Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Carrier RNA, Rnase Free Water, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes (special T-rack required for 5 ml sample tubes)* *Shelf life: 18 months*							
							MVN2400	90 min (sample volume:2400 µl) (Applicable models: HF16, Compact)
211	*MagCore® Viral Nucleic Acid Large Volume Extraction Kit (1.2 ml)* *For 1200 µl sample volumes.* *Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Carrier RNA, Rnase Free Water, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes* *Shelf life: 18 months*							
			MVN1200	80 min (sample volume:1200 µl) *optical detection is not provided			MVN1200	73 min (sample volume:1200 µl)

Enzyme Selection Guide

Product	Contents	Cat.No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
Carrier RNA Set	1mg Carrier RNA, RNase Free Water	CR001

FDA CE IVD FC ISO 13485 SGS UKAS MANAGEMENT SYSTEMS 005

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Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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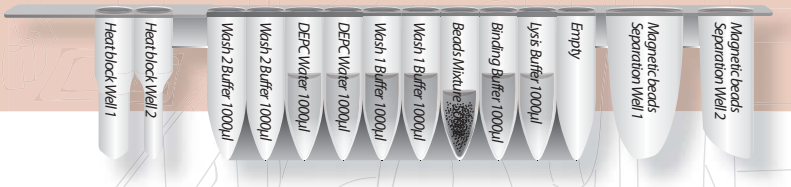
MagCore® Nucleic Acid Extraction Kits

For Extraction of Viral DNA/RNA From Serum, Plasma, Swabs and Cell-Free Body Fluids by Using MagCore® System

MagCore® Viral Nucleic Acid Kits are designed to isolate viral DNA and/or RNA from plasma, serum, swabs and cell-free body fluids. All plastic consumables included in the kits are DNase/RNase-free to minimize the risk of cross contamination. Our patented magnetic beads will bind to the short DNA fragments with high affinity ensuring that all important genetic information is collected efficiently making your daily isolation routine easier and faster. This kit also features Internal Control selection in its protocol, being compatible with any viral detection kit.

203

MagCore® Viral Nucleic Acid Extraction Kit (High Sensitivity)



Features

1. Higher analytical sensitivity.
2. Consistent and reproducible results.
3. High performance of purified DNA/RNA in downstream applications such as qPCR.
4. Cartridges are pre-filled and sealed to prevent contamination.
5. Provides the option of Internal Control selection.

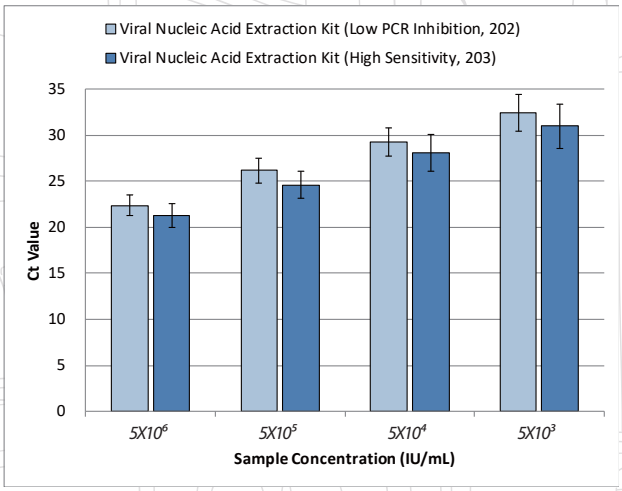
Applications

MagCore® Viral Nucleic Acid Extraction Kit allows automated processing of multiple sample types in the same run, including:

1. *Cell-Free Body Fluids*
2. *Plasma and Serum*
3. *CSF*
4. *Urine*
5. *Swabs*

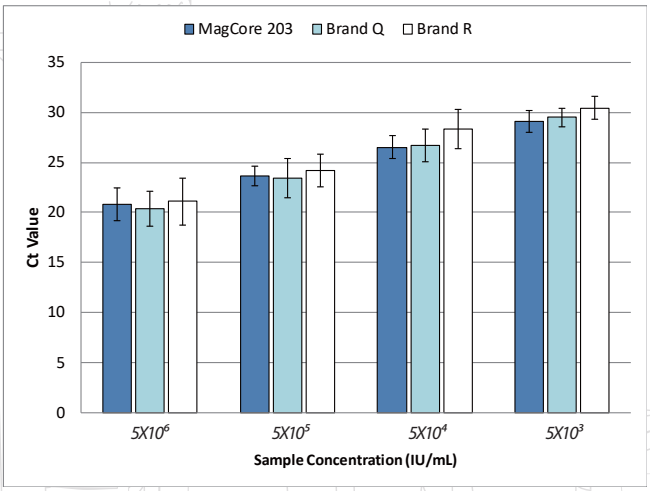
Performance

Viral Nucleic Acid Extraction Performance Analysis



MagCore®203 shows better performance on real-time PCR with approximately 1~2 Ct Value less. (n≥3)

Comparison of real-time PCR results of nucleic acid extraction by MagCore®, Brand Q and Brand R



Purified viral nucleic acid by MagCore® is ideal for the downstream real-time PCR. Viral samples processed by MagCore®

Internal Control (IC) Selection

No.	Kit	Signal	Sample Concentration (IU/mL) – HBV Signal / IC Signal				NTC
			$5x10^6$	$5x10^5$	$5x10^4$	$5x10^3$	
1	MagCore® 203	HBV	22.06	25.39	28.58	30.53	-/-
		+IC	29.99	31.54	31.17	31.55	
2		HBV	23.82	26.51	29.78	33.17	
		+IC	31.19	30.79	30.51	32.73	

MagCore®203 program provides internal control (IC) selection, and the real-time PCR analyzed by CE IVD HBV Quantification kit shows IC signal within criteria (Ct value 30±3). This confirms success in MagCore®203 viral extraction step and low co-purification of PCR inhibitors that may cause false amplification patterns.

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II				MagCore® HF16 / Compact / HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
203 MagCore® Viral Nucleic Acid Extraction Kit (High Sensitivity) For 200 and 400 µl sample volumes. Contents: Pre-filled Cartridges, Proteinase K, PK Storage Buffer, Carrier RNA, RNase Free Water, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes. Shelf life: 12 months								
	MVN400-05		MVN400-06	57 Mins / With IC Selection: 58 Mins (sample volume:200 µl) 66 Mins / With IC Selection: 67 Mins (sample volume:400 µl)	MVN400-05		MVN400-06	56 Mins / With IC Selection: 57 Mins (sample volume:200 µl) 72 Mins / With IC Selection: 73 Mins (sample volume:400 µl)

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
Carrier RNA Set	1mg Carrier RNA, RNase Free Water	CR001

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
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MagCore® Nucleic Acid Extraction Kits

For extraction of plant DNA from plant tissues

MagCore® Genomic DNA Plant Kit is designed to extract DNA from plant tissues and cells using MagCore® automated extraction systems. The provided Filter Column Set can filtrate hard tissue samples to prevent tissue residues from clogging the pipette syringe. The kit contains all required reagents and labware for automated extraction using magnetic-particle technology. Reagents are supplied and pre-filled in cartridges, which can be easily loaded into the MagCore® instrument.

301

MagCore® Genomic DNA Plant Kit

Features

1. Lysis buffer can degrade large amounts of polysaccharides present on plant cell walls
2. Cartridges are pre-filled and sealed to prevent contamination.
3. No phenol or chloroform extraction and alchol precipitation.
4. Efficient removal of contaminants and inhibitors.

Applications

The MagCore® Genomic DNA Plant Kit enables DNA purification from various samples types, including:

1. Plant cells
2. Plant tissues

High quality DNA available for downstream applications, including:

1. PCR and real-time PCR
2. Next Generation Sequencing (NGS)

Performance

Yields of nucleic acid purified from various sources by MagCore® Genomic DNA Plant Kit

Sample ID	Position	Yield (ng/μl)
Citrus nobilisLour.	Leaf	36.5
Carica papaya	Leaf	49.2
Lycopersicon esculentum	Leaf	71.9
Ctrullus lanatus	Leaf	23.4
Anisogonium esculentum	Leaf	240.3
Trachycarpus fortunei	Leaf	154.7
Mentha piperita	Leaf	54.6
Anthoceros punctatus	Leaf	38.9
Calix babylonica	Leaf	80.7
Prnus campanulata	Leaf	35.7
Lxeris chinensis	Leaf	161.4
Capsicum annuum	Leaf	13.9
Vigna radiata	Seed	7.0
Medicago sativa	Leaf	21.0
Vigna angularis	Seed	5.8
Agaricus bisporus	Whole	14.3

MagCore® Automated Nucleic Acid Kits Specification

	MagCore® Super/HF16 Plus/Plus II				MagCore® HF16 /Compact/HF48			
Cartridge Code	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
301	**MagCore® Genomic DNA Plant Kit** For 50-100 mg fresh tissues or 5-20mg dried plant tissues Contents: Pre-Filled Cartridges, Rnase A, GP1 Buffer, GP2 Buffer, Filter Column Sets, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
MGP-01		MGP-02	Time: 33 min (sample volume:400 μl) *optical detection is not provided	MGP-01		MGP-02	33min(sample volume: 400 μl) (Applicable models: HF16, Compact)	

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
RNase A	50 μl RNase A (50mg/ml)	RN050
	130 μl RNase A (50mg/ml)	RN130

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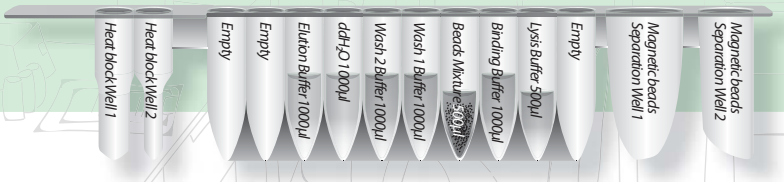
MagCore® Nucleic Acid Extraction Kits

For extraction of genomic DNA from tissues, swabs, FFPE, stool, feed/soil and forensic samples

MagCore® Genomic DNA Tissue Kit is designed for purification of total DNA (including genomic, mitochondrial and viral DNA) from a variety of animal tissues or cells by using MagCore® auto-extraction instrument. The provided Filter Column can filtrate hard tissue sample or swab sample to prevent tissue residues to obstruct pipette tip during the process of MagCore®. The method uses pre-filled cartridges based on cellulose coated magnetic bead technology.

401

401 MagCore® Genomic DNA Tissue Kit



Features

1. Suitable for a wide variety of sample types, including forensic samples
2. Consistent and reproducible results
3. Purified DNA of approximately 20-30 kb in length is suitable for PCR or other enzymatic reactions.

Applications

MagCore® Genomic DNA Tissue kit allows processing multiple sample types in the same run, including:

1. Animal Tissues: Solid animal tissue, Stool samples
2. Swabs
3. Feed and soil samples
4. Formalin-fixed, Paraffin-embedded (FFPE) tissues samples (manual pretreatment)
5. Cultured Yeast samples
6. Forensics samples

Performance

DNA yield gained from 10 mg of mice tissue samples and 0.25 cm tail

Mice tissue	Yield (ng/ul)
Liver	17.5
Spleen	17.5
Brain	10
Lung	12.5
Kidney	32.5
Tail	7.5

Table 1. Genomic DNA was purified from 10mg of mice tissue samples and 0.25cm tail.

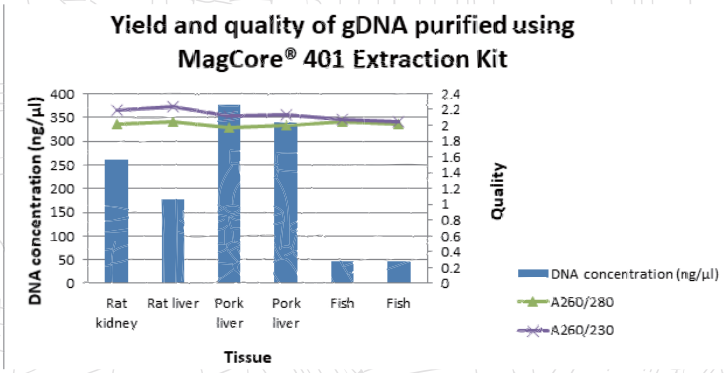


Figure 1. Genomic DNA from 10mg of various animal tissues were extracted by the MagCore®401 Genomic DNA Tissue Kit. DNA was eluted in 60 µL and quantitated using Nanodrop n-1000.

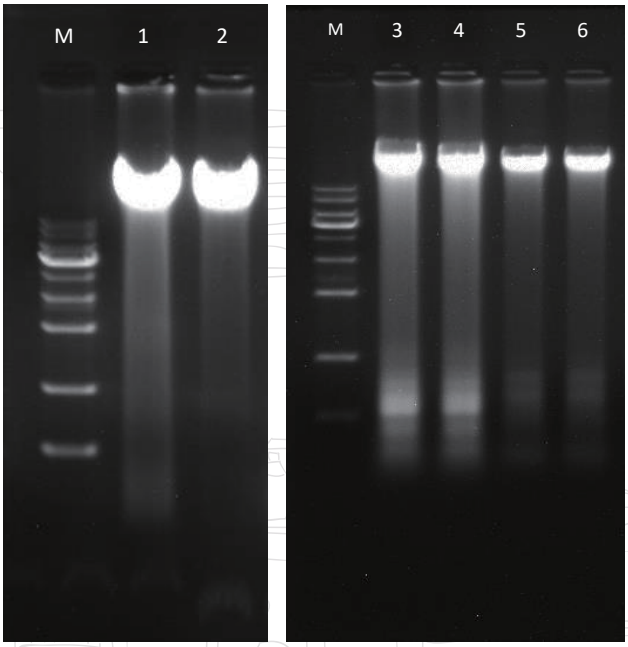


Figure 2. Agarose gel electrophoresis of the various animal tissue DNA was isolated from MagCore® automated extraction. ; Lane M: RBC 1 kb DNA ladder Marker; Lane 1: Rat kidney; Lane 2: Rat liver; Lane 3-4: Pork liver; Lane 5-6: Fish tissue.

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II				MagCore® HF16 / Compact / HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
401	**MagCore® Genomic DNA Tissue Kit** For tissue and forensic samples (up to 40mg) Contents: Pre-Filled Cartridges, Filter Column Sets, GT Buffer, Proteinase K, PK Storage Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
	MGT-01		MGT-02	33 min (sample volume:400 µl) *optical detection is not provided	MGT-01		MGT-02	33 min (sample volume:400 µl)

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
RNase A	50 µl RNase A (50mg/ml)	RN050
	130 µl RNase A (50mg/ml)	RN130

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Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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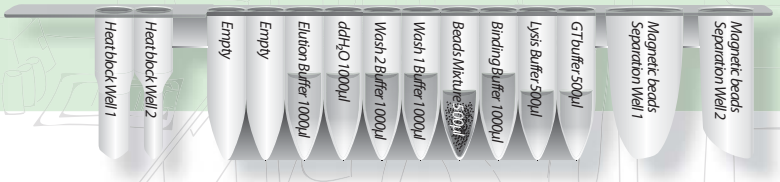
MagCore® Nucleic Acid Extraction Kits

For Automated Extraction of Genomic DNA from Formalin-fixed Paraffin-embedded (FFPE) Tissue

MagCore® Genomic DNA FFPE One-Step Kit is designed to purify total DNA (including genomic, mitochondrial, and viral DNA) from Formalin-fixed Paraffin-embedded tissues via MagCore® Automated Extraction instruments. Our program features One-Step Heating, which automatically melts paraffin and lyses cells at the same time. No harmful reagent such as xylene is involved in the deparaffination process. Two protocols are outlined for different tissues sizes: 2-hour setup for smaller tissues and 16-hour setup for larger tissues.

405

405 MagCore® Genomic DNA FFPE One-Step Kit

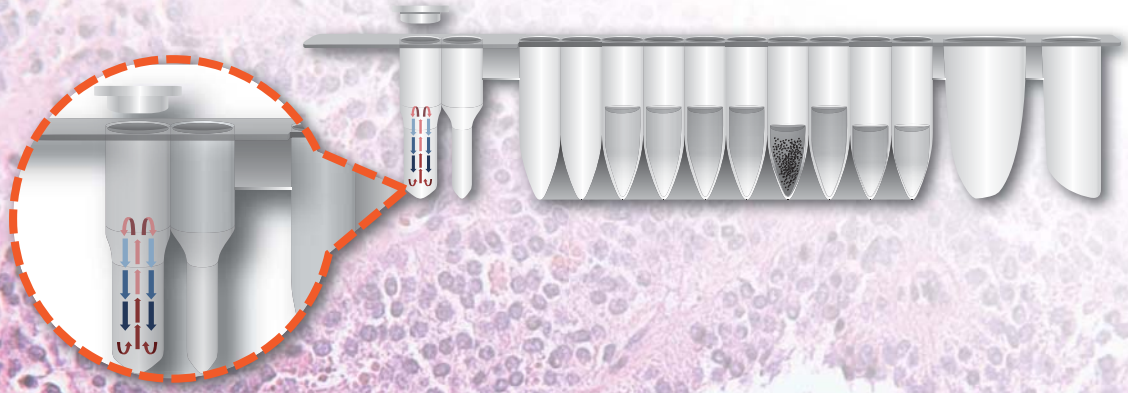


Features

1. Can load FFPE tissue samples with a surface area of up to 300 mm2 and up to 5µm thick.
2. A full package for DNA to be purified from FFPE samples. Complete automatic procedure from deparaffination to elution.
3. Stable deparaffination by Sula oil and reproducible results; no xylene involved.
4. Thermostavle cap is specially designed to cover the reaction well for an optimal condition where the lysis buffer and the FFPE sample can mix properly during the processing period.

Applications

1. PCR and real-time quantitative PCR
2. Southern Blot
3. Next Generation Sequencing
4. Genotyping



Performance

2-hr heating protocol works out

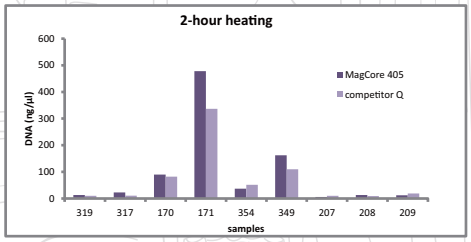
There are 2-hour heating and 16-hour heating protocols. It is suggested for a better performance that the 2-hour heating program is for small tissues and the 16-hour program is for large tissues.

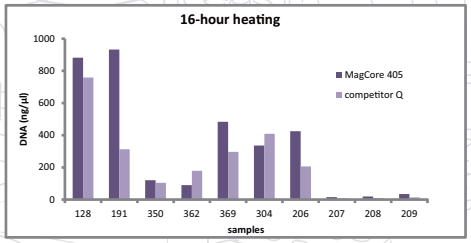
Genomic DNA with high performance

The DNA extracted by MagCore® Genomic DNA FFPE One-Step Kit is high yield and suitable for downstream PCR and real-time PCR.

A. DNA concentration

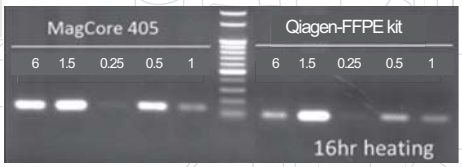
Whether samples were treated with either a 2-hour or 16-hour heating, yields of DNA extracted by MagCore® are mostly higher than the yields of DNA extracted by the competitor.





B. The downstream PCR

PCR products of DNA purified by MagCore® and the competitor brand are confirmed by 1.5% agarose gel electrophoresis.

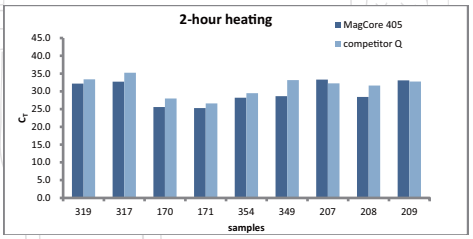


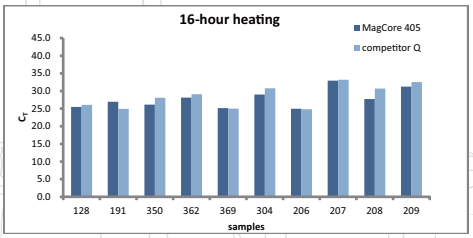
DNA yield gained from 10 mg of mice tissue samples and 0.25 cm tail

Sample ID	Yield (ng/ul)
Liver	17.5
Spleen	17.5
Brain	10
Lung	12.5
Kidney	32.5
Tail	7.5

C. Purified DNA ideal for the downstream real-time PCR

Whether samples experience a 2-hour or 16-hour heating, the CT values of samples processed by MagCore® are mostly lower than the CT values of samples processed by the competitor.





D. Tissue sample sizes

It is shown below that different sizes of tissue samples were processed by a 2-hour or 16-hour heating program.

2-hour heating

	Sample	Size(cm²)
1	319	1*1
2	317	0.8*0.8
3	170	0.5*1
4	171	1.5*1
5	354	1.5*2
6	349	1.5*2
7	207	0.5*0.5
8	208	0.5*1
9	209	0.5*1

16-hour heating

	Sample	Size(cm²)
1	128	2*3
2	191	2*2
3	350	2*2
4	362	2*3
5	369	2*2
6	304	2*3
7	206	1.5*1
8	207	0.5*0.5
9	208	0.5*1
10	209	1*1

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super/HF16 Plus/Plus II				MagCore® HF16/Compact/HF48			
	Cat No.	Cat No.	Cat No.	Running Time	Cat No.	Cat No.	Cat No.	Running Time
	36 preps	72preps	96preps		36 preps	72preps	96preps	
405	MagCore® Genomic DNA FFPE One-Step Kit For FFPE tissue samples. Contents: Thermostable Cap, Sula Oil, Pre-Filled Cartridges, Filter Column Sets, GT Buffer, Proteinase K, PK Storage Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
	MGF-01		MGF-03	33min(sample volume:400μl)	MGF-01		MGF-03	175 min(2-hour heating) -Standard 1012 min(16-hour heating)-High Yield

Enzyme Selection Guide

Product	Contents	Cat.No.
Proteinase K Set	11 mg Proteinase K,1.25 ml PK Storage Buffer	PK011
RNase A	50 μl RNase A (50mg/ml)	RN050
	130 μl RNase A (50mg/ml)	RN130

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
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MagCore® Nucleic Acid Extraction Kits

For extraction of genomic DNA from forensic samples

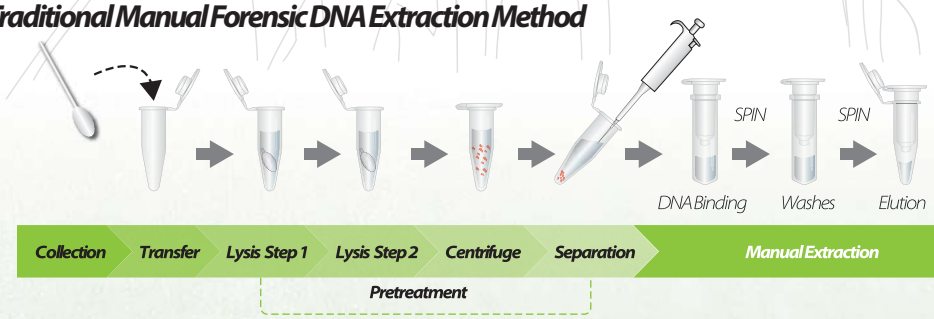
MagCore® Genomic DNA Forensic Direct Kit is designed for purifying total DNA from forensic samples, such as dried blood spots, cigarette butts, cartilage, hair roots, seminal stains, and chorionic villus, using MagCore® auto-extraction instruments. Its unique feature is RBC patented technology that allows to isolate DNA automatically from solid samples without any pretreatment.

406 **MagCore® Forensic DNA Direct Kit**

Applications

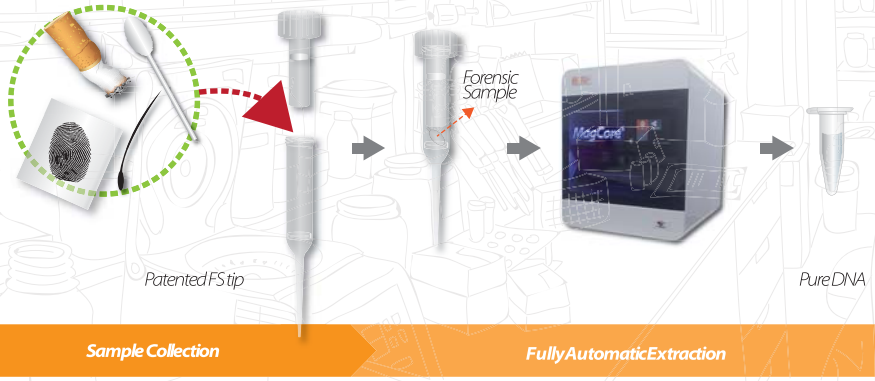
It uses magnetic-particle technology to purify genomic DNA from forensic samples. The purified genomic DNA can be directly used for downstream applications such as STR, PCR and real-time PCR.

Traditional Manual Forensic DNA Extraction Method



Automated Lysis and Separation

MagCore® Forensic DNA Direct Kit Method

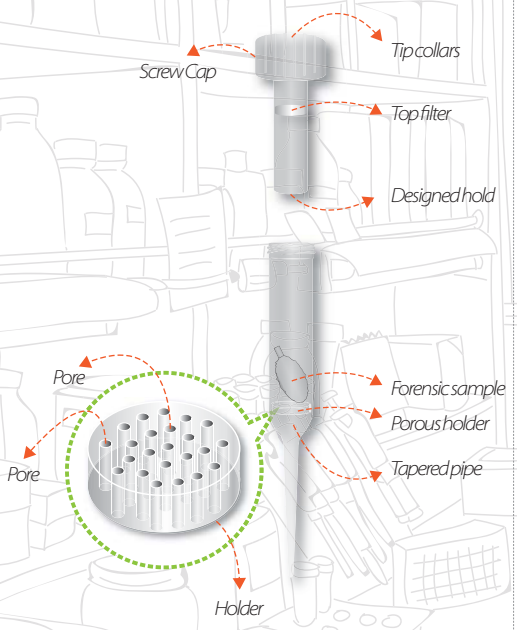


Performance

Unique Pipette Tip Design

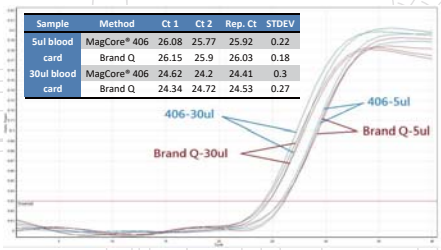
Novel Patented Tip

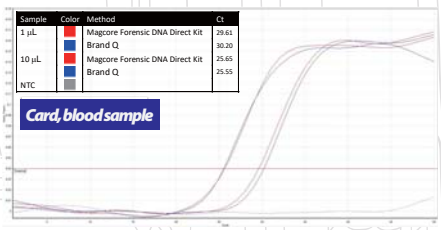
- Airtight assurance (hermetic seal)
- Minimal aerosol contamination
- Automatic separation of the solid debris

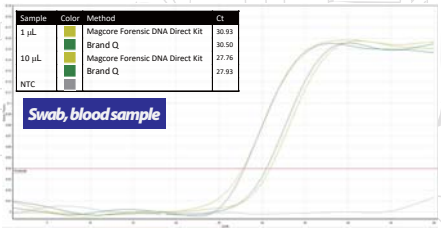


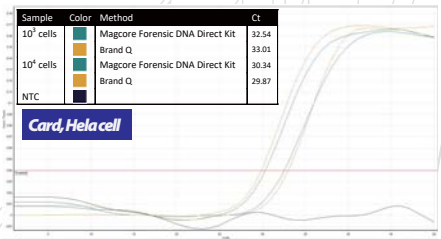
Compare the results between 406 and Q kit by qPCR

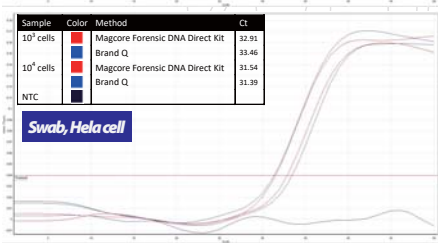
Sample	Method	Ct 1	Ct 2	Rep. Ct	STDEV
5ul blood card	MagCore® 406	26.08	25.77	25.92	0.22
	Brand Q	26.15	25.9	26.03	0.18
30ul blood card	MagCore® 406	24.62	24.2	24.41	0.3
	Brand Q	24.34	24.72	24.53	0.27











Other casework samples

Reference samples

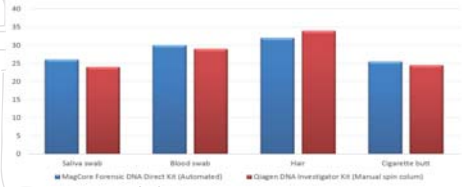


Figure: Extraction of simulated casework samples. This test was analyzed by real-time PCR with GAPDH gene primer. Saliva swab: 10 ml of saliva was applied (n=4). Blood swab: 1 ml of blood was applied and allowed to dry (n=4). Hair: 1 hair each from donor (n=4). Cigarette butt: A quarter of a filter paper (n=4).

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II				MagCore® HF16 / Compact / HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
406	**MagCore® Forensic DNA Direct Kit** For extracting genomic DNA from forensic samples Contents: Pre-Filled Cartridges (Including Proteinase K), Disposable Tip & Holder Sets, Elution Tubes, FS Tip, 200 ml SP Tip Shelf life: 12months							
		MFC-03		120 min				

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
RNase A	50 µl RNase A (50mg/ml)	RN050
	130 µl RNase A (50mg/ml)	RN130

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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MagCore® Nucleic Acid Extraction Kits

For extraction of genomic DNA from bacteria

MagCore® Genomic DNA Bacterial Kit is designed to extract genomic DNA from Gram positive and Gram negative bacteria. The Kit contains all required reagents and labware for automated extraction using magnetic-particle technology. Reagents are supplied and prefilled in cartridges, which can be easily loaded into the MagCore® instrument.

502 **MagCore® Genomic DNA Bacterial kit**

Features

1. High performance of purified DNA in downstream applications such as qPCR.
2. Cartridges are pre-filled and sealed to prevent contamination.
3. No phenol or chloroform involved.

Applications

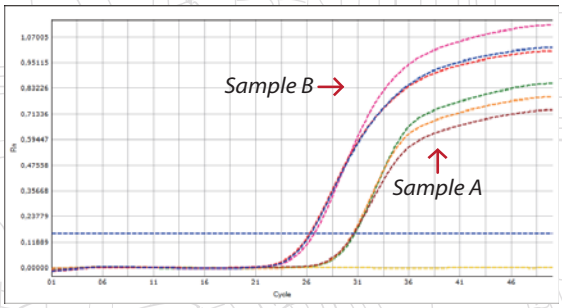
MagCore® Genomic DNA Bacterial Kit is designed for automated DNA extraction from various sample types, including:

1. Cell cultures in suspension (up to 2x 10^9 cells)
2. Biological fluids
3. Cell cultures on plate
4. Gram-positive and Gram-negative bacteria

Performance

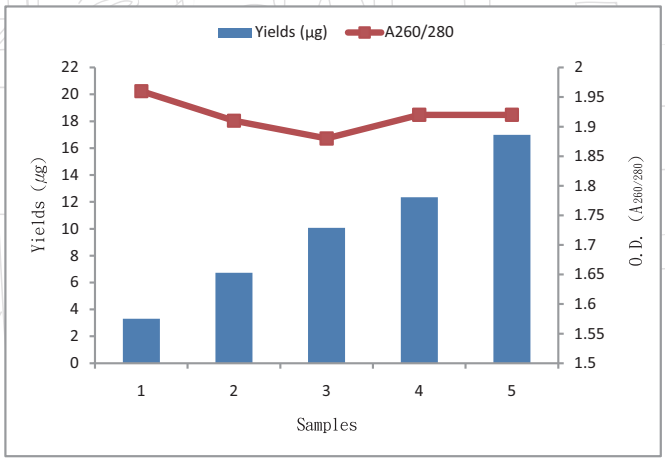
High performance of purified bacterial DNA in real-time PCR

Well	Type	Target	Ct	Interpretation	Label
D2	Unknow	H. pylori	30.70	Positive	Sample A
D3	Unknow	H. pylori	30.52	Positive	Sample A
D4	Unknow	H. pylori	No Ct	Negative	Negative Ctrl
D5	Unknow	H. pylori	30.59	Positive	Sample A
E2	Unknow	H. pylori	26.73	Positive	Sample B
E3	Unknow	H. pylori	26.28	Positive	Sample B
E4	Unknow	H. pylori	26.40	Positive	Sample B



A

B



Consistent Yield, Purity, and Reproducibility in MagCore® Bacteria Genomic DNA Extraction

MagCore® Automated Nucleic Acid Kits Specification

	MagCore® Super/HF16 Plus/Plus II				MagCore® HF16 /Compact/HF48			
Cartridge Code	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
502 MagCore® Genomic DNA Bacterial kit For 1200μl sample volumes. Contents: Pre-Filled Cartridges, Lysozyme Reaction Buffer, Proteinase K, PK Storage Buffer, Rnase A, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months								
	MBB-01		MBB-02	39 min (sample volume:200 μl) *optical detection is not provided	MBB-01		MBB-02	44min (sample volume:200 μl)

Enzyme Selection Guide

Product	Contents	Cat.No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
RNase A	50 μl RNase A (50mg/ml)	RN050
	130 μl RNase A (50mg/ml)	RN130

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
www.rbcbioscience.com
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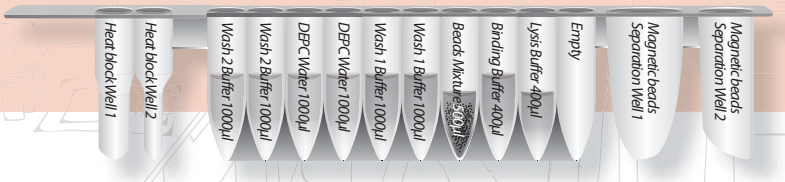
MagCore® Nucleic Acid Extraction Kits

For total RNA extraction from human whole blood

MagCore® Total RNA Whole Blood Kit is designed for total RNA purification from up to 0.4ml human whole blood using MagCore® automated extraction systems. DNase I is optional for eliminating possible DNA contaminants during the isolation of RNA.

601

MagCore® Total RNA Whole Blood Kit



Features

1. Able to process up to 0.4 ml of human whole blood.
2. No phenol or chloroform involved.
3. Pure RNA: $A_{260}/_{280}$ ratio between 1.9 and 2.2
4. RNA ready to use in downstream applications.
5. Optional DNase I for eliminating potential DNA contaminants.

Applications

Purified RNA ready to use in downstream applications such as:

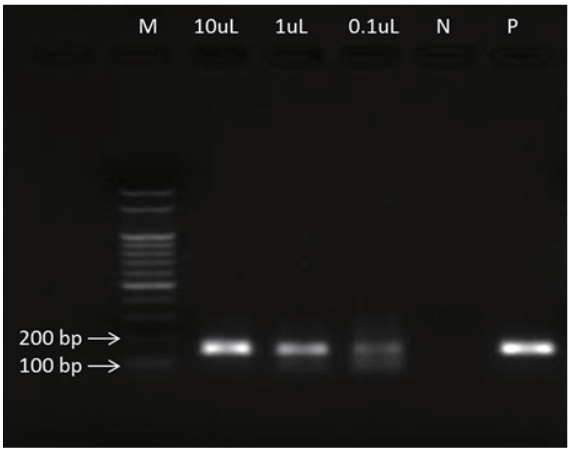
1. PCR
2. Real-time PCR
3. cDNA synthesis

Performance

Total RNA with high performance

Nested RT-PCR analysis

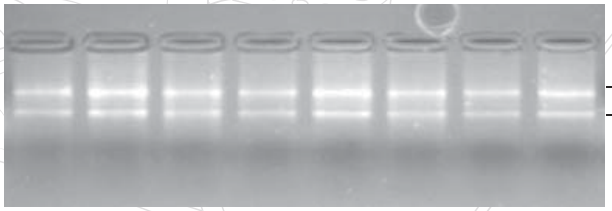
RNA eluted in a final volume of 60µl was purified from 400µl whole blood of healthy subjects by the MagCore® Total RNA Whole Blood Kit. Eluates of different volumes (10µl, 1µl and 0.1µl) were subjected to reverse transcription.



M: 100bp DNA ladder
N: negative control
P: positive control

Performance

Total RNA was isolated from human whole blood samples by the employment of MagCore® instrument and Total RNA Whole Blood Kit (400 µl sample volume). The yield is 1µg RNA/ 400 µl whole blood.
Eight replicates were applied to an agarose gel, showing the purified total RNA without signs of degradation.

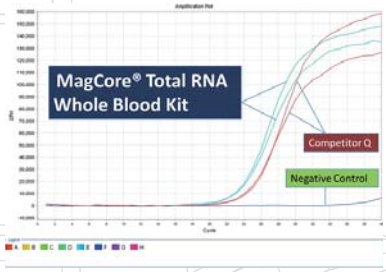


Comparison of real-time PCR results of mRNA extracted by MagCore® and Brand Q

mRNA was isolated from human whole blood by either the MagCore® Total RNA Whole Blood Kit or the Brand Q manual whole blood RNA Kit.

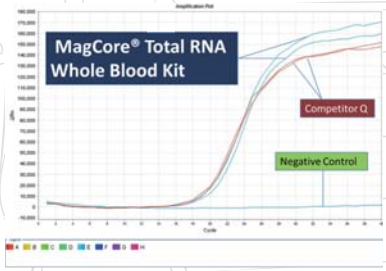
KRAS

Sample	1	2	Q1	Q2	N
Ct	24.47	24.26	25.47	25.67	——



BAC (β-actin)

Sample	1	2	Q1	Q2	N
Ct	20.44	20.98	20.34	20.11	——



MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II				MagCore® HF16 / Compact / HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
601 MagCore® Total RNA Whole Blood Kit For whole blood samples (up to 0.4ml) Contents: Pre-Filled Cartridges, RBC Lysis Buffer, RB Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months	MRN-01		MRN-02	50min (without DNase I treatment; starting volume: 200 µl) 75min (with DNase I treatment; starting volume: 200 µl) *optical detection is not provided	MRN-01		MRN-02	42min (without DNase I treatment; starting volume: 200 µl) 68min (with DNase I treatment; starting volume: 200 µl) (Applicable models: HF16, Compact)

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
DNase I Set	For 36 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 1 vial, 1 ml RNase-Free Water x1, 15 ml DNase I Reaction Buffe	DN036
	For 96 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 2 vial, 1 ml RNase-Free Water x2, 30 ml DNase I Reaction Buffer	DN096

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Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
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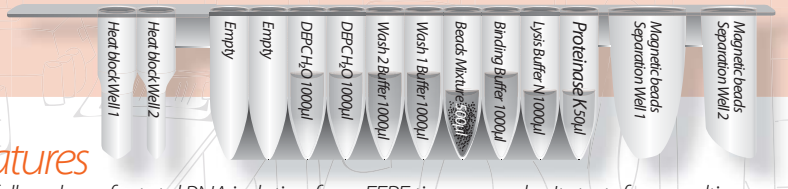
MagCore® Nucleic Acid Extraction Kits

For extraction of total RNA from formalin-fixed paraffin-embedded (FFPE) tissue by using MagCore® System.

MagCore® Total RNA FFPE One-Step Kit is specially designed for total RNA purification from FFPE tissues by MagCore® instruments. It features the method, one-step heating, to melt paraffin without harmful reagents involved such as xylene or other organic solvents, and lyse tissues at the same time. The MagCore® Total RNA FFPE One-Step Kit System optimizes the lysis conditions to reverse the formalin fixation without the need for overnight digestion and retain both large and small RNAs. The program provides optional DNase I treatment to remove contaminated DNA.

605

MagCore® Total RNA FFPE One-Step Kit



Features

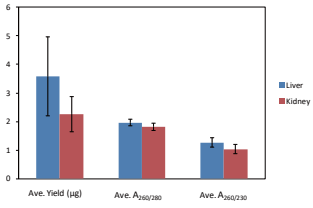
1. A full package for total RNA isolation from FFPE tissue samples. It starts from melting paraffin to the final RNA purification.
2. Highly user-friendly protocol with minimal pretreatment required.
3. Sula oil (Deparaffinization solution): no xylene or other organic solvents involved.
4. Thermostable cap is especially designed to cover the reaction well for an optimal condition where lysis buffer and the FFPE samples can mix properly during the long processing period.
5. The total processing time is within approximately 160 mins.

Applications

The purified RNA can be directly used for downstream application such as:

1. cDNA synthesis
2. real-time PCR
3. RT-PCR
4. Microarray
5. Next-Generation Sequencing

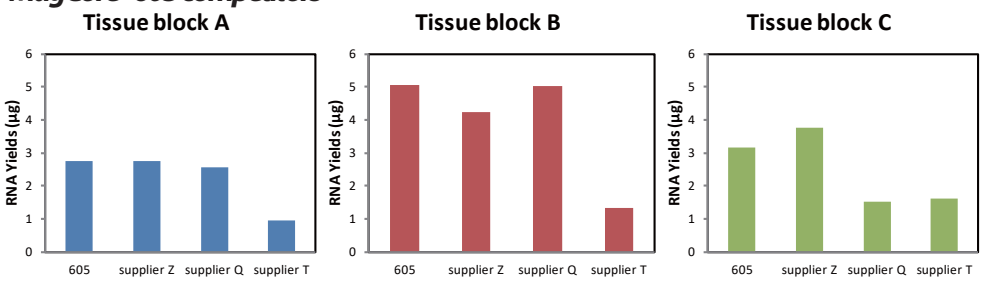
FFPE RNA extraction efficiency



Rat tissue	Average Yields (µg)	Average $A_{260}/_{280}$	Average $A_{260}/_{230}$
Liver	3.57±1.38	1.96±0.11	1.26±0.16
Kidney	2.25±0.62	1.82±0.12	1.03±0.15

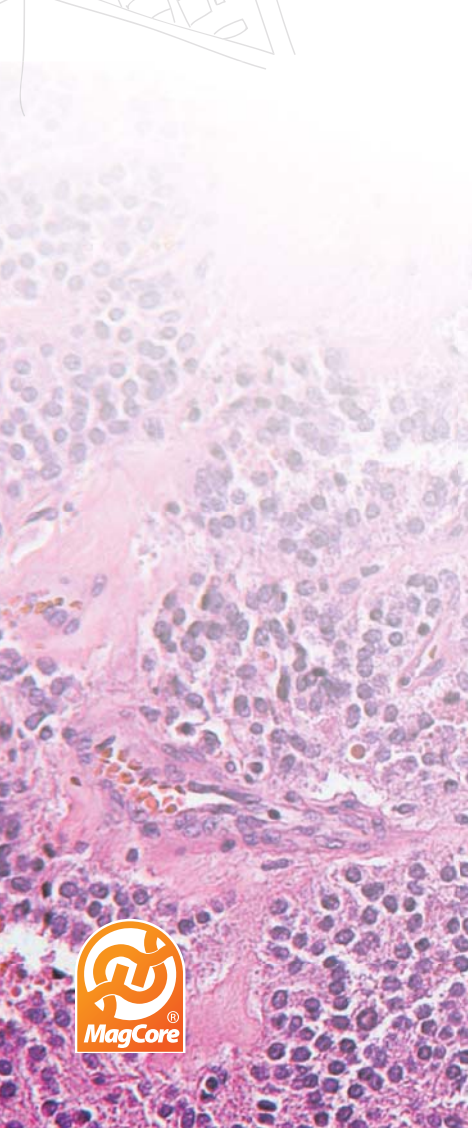
Total RNA was purified from various FFPE rat tissues stored at -80°C for 3 months. RNA yield and quality from one (liver, kidney) 50 µm tissue section per sample was determined by Nanodrop n-1000.

MagCore® 605 competitors



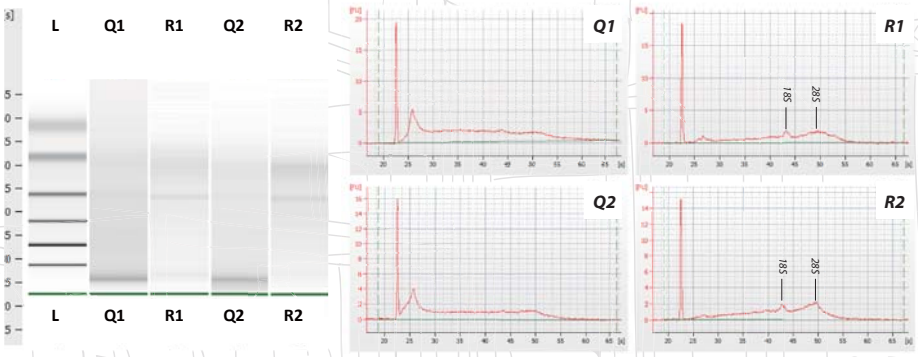
	Tissue block A				Tissue block B				Tissue block C			
$A_{260/280}$	**2.01**	**2.01**	**1.98**	**1.91**	**2.04**	**2.04**	**1.94**	**2.06**	**1.99**	**2**	**1.91**	**2.13**
$A_{260/230}$	2.15	2.38	2.28	1.90	2.08	2.3	2.17	1.89	2.02	2.03	2.43	0.13

MagCore® 605 retains high RNA extraction efficiency in various rat liver tissue blocks compare to several FFPE RNA purification kit suppliers. The RNA yield and quality was quantified by Nanodrop n-1000.



Performance

RNA integrity

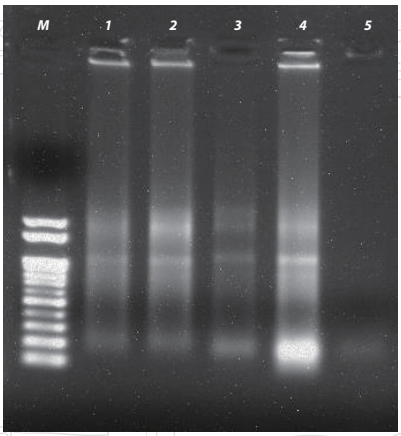


	Competitor Q			MagCore® 605		
Tissue Block	Sample	RNA yields (ng/µl)	RIN	Sample	RNA yields (ng/µl)	RIN
#1	Q1	97.37	2.2	R1	77.9	3.2
#2	Q2	58.7	2.2	R2	62.6	3.3

RNA integrity assessment

Total RNA isolation from rat liver 50µm tissue sections of FFPE tissue blocks were measured on Agilent 2100 bioanalyzer. Isolated RNA from MagCore® 605 kit maintains its integrity (18S, 28S peaks).

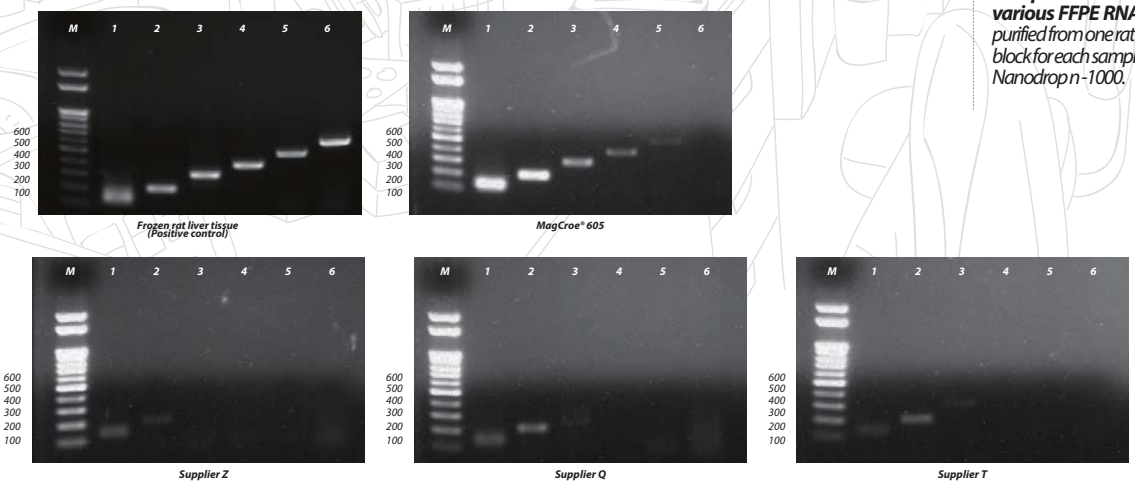
MagCore® 605 competitors



Brand	Sample	nanodrop (ng/µl)	$A_{260}/_{280}$	$A_{260}/_{230}$	Ct Value (GAPDH)
MagCore® 605	1	60.12	1.93	1.48	24.01
	2	74.79	1.89	1.52	22.02
Supplier Z	3	31.21	1.96	1.49	26.61
Supplier Q	4	117.54	1.93	2.17	23.75
Supplier T	5	5.89	1.46	0.15	27.39

Comparison of total RNA extraction efficiency by using various FFPE RNA extraction kit suppliers. *Total RNA was purified from one rat liver 50µm tissue section of a single FFPE tissue block for each sample. The RNA yield and quality was quantified by Nanodrop n-1000.*

RT-PCR performance



Evaluation of RNA performance in RT-PCR

Five amplicons of different length (118, 206, 312, 400, 503, 613 bp amplicon size) of the gene Rpl4 performed using cDNA derived from FFPE rat liver samples purified by various suppliers.

MagCore® Automated Nucleic Acid Kits Specification

	MagCore® Super / HF16 Plus / Plus II			MagCore® HF16 / Compact		
Cartridge Code	Cat No. 24preps	Cat No. 72preps	Running Time	Cat No. 24 preps	Cat No. 72preps	Running Time
605 MagCore® Total RNA FFPE One-step Kit For extraction of total RNA from formalin-fixed paraffin-embedded (FFPE) tissue by using MagCore® System. Contents: Pre-Filled Cartridges, Disposable Tip & Holder Sets, Elution Tubes Shelf life: 12 months						
	MRF-01	MRF-03	140min (without DNase I treatment) 158min (with DNase I treatment)	MRF-01	MRF-03	147min (without DNase I treatment) 165min(with DNase I treatment)

Enzyme Selection Guide

Product	Contents	Cat. No.
DNase I Set	For 36 reactions RNase-Free DNase I (Lyophilized):1500 Kunitz units x 1 vial, 1 ml RNase-Free Water x1, 15 ml DNase I Reaction Buffe	DN036
	For 96 reactions RNase-Free DNase I (Lyophilized):1500 Kunitz units x 2 vial, 1 ml RNase-Free Water x2, 30 ml DNase I Reaction Buffer	DN096

FDA CE IVD FC ISO 13485 SGS UKAS MANAGEMENT SYSTEMS 005

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

RBC Bioscience Corp.
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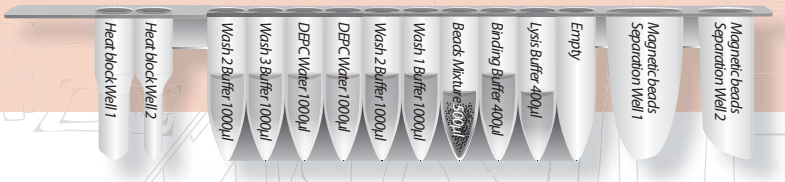
MagCore® Nucleic Acid Extraction Kits

For total RNA extraction from cultured cells

MagCore® Total RNA Cultured Cells Kit is designed for purifying total RNA from up to 1x10^6 cultured cells using MagCore® instrument. DNase I is optional for eliminating possible DNA contaminants during the isolation of RNA.

610

MagCore® Total RNA Cultured Cells Kit



Features

1. High quality RNA ready-to-use for downstream applications
2. No phenol or chloroform involved.
3. Pure RNA: $A_{260}/_{280}$ ratio between 1.9 to 2.2
4. Optional DNase I for eliminating potential DNA contaminants.

Applications

Purified RNA ready to use in downstream applications such as:

1. PCR
2. Real-time PCR
3. Microarray target preparation
4. Northern blotting
5. NGS analysis

Performance

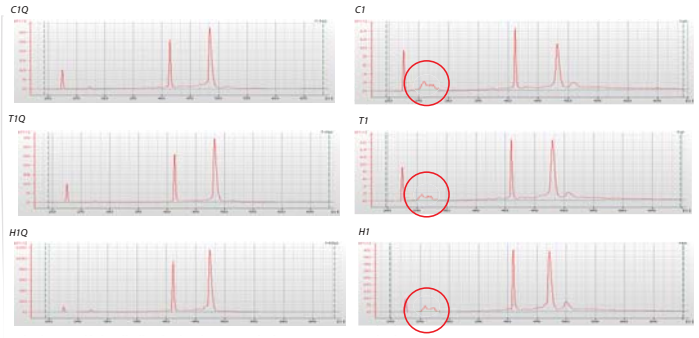
Aanalysis of RNA by Agilent Bioanalyzer 2100

	Sample name	Sample volume (µl)	RNA conc. (ng/µl)	RNA quantity (µg)	$OD_{260/280}$ Ratio	Bioanalyzer chip lane location	28S/18S Ratio	RIN
#1	C1 Q	200 µl	69.72	11.8	2.07	1	2.1	9.8
#2	C1	200 µl	84.98	14.4	2.03	2	1.4	9.0
#3	T1 Q	200 µl	73.05	12.4	2.00	3	2.1	10.0
#4	T1	200 µl	72.58	12.3	2.00	4	1.8	9.2
#5	H1 Q	200 µl	177.19	30.1	2.05	5	1.9	10.0
#6	H1	200 µl	194.62	33.0	2.06	6	1.7	9.2

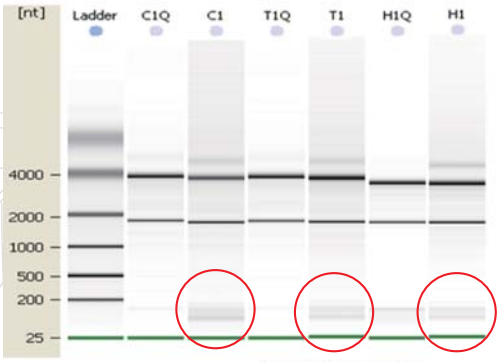
Comparison of RNA by Agilent bioanalyzer 2100. Cultured cells of three cell lines (C1, T1 and H1) were used for RNA purification using either the MagCore Total RNA Cultured Cells Kit or Brand Q manual whole blood RNA kit. It is shown that the MagCore Total RNA Cultured Cells Kit can extract RNA of various sizes such as mRNA, ribosomal RNA even microRNA (miRNA) and small interfering RNA (siRNA).

Bioanalyzer electropherogram

Supplier Q **MagCore®**



Agilent Bioanalyzer Gel Image



Small RNA Species

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II				MagCore® HF16 / Compact / HF48			
	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time	Cat No. 36 preps	Cat No. 72preps	Cat No. 96preps	Running Time
610	**MagCore® Total RNA Cultured Cells Kit** For Cultured cell samples (up to 1 x 10^6 cells) Contents: Pre-Filled Cartridges, RB Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
	MRC-01		MRC-02	52min (without DNase I treatment; starting volume: 200 µl) 79min (with DNase I treatment; starting volume: 200 µl) *optical detection is not provided	MRC-01		MRC-02	42min (without DNase I treatment; starting volume: 200 µl) 72min (with DNase I treatment; starting volume: 200 µl) (Applicable models: HF16, Compact)

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
DNase I Set	For 36 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 1 vial, 1 ml RNase-Free Water x1, 15 ml DNase I Reaction Buffe	DN036
	For 96 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 2 vial, 1 ml RNase-Free Water x2, 30 ml DNase I Reaction Buffer	DN096

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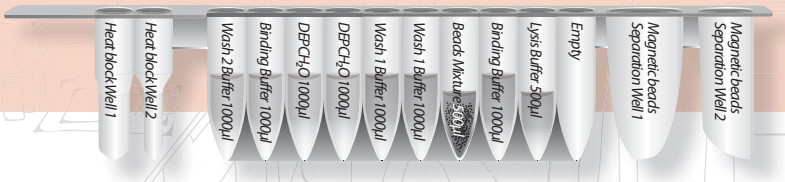
MagCore® Nucleic Acid Extraction Kits

For total RNA extraction from cultured cells, whole blood and tissues

MagCore® triXact RNA Kit is specially designed for total RNA purification from the three most common sample types in diagnostics, research, and forensics: up to 1x10^6 cultured cells, a variety of tissues, or whole blood samples. The program provides optional DNase I treatment to remove residual DNA and extract high quality DNA-free RNA. Make use of its oustanding extraction performance, effiency, plus easy-to-follow protocols to simplify your every day extraction !

631

MagCore® triXact RNA Kit



Features

1. *Excellent RNA Yield and Purity shown in both A_{260}/A_{280} ratio and RIN value*
2. *Highly efficienct and user-friendly protocol with minimal pretreatment required*
3. *Capable of isolating RNA from 3 types of samples: Cells, Whole blood, Tissues*
4. *Optional DNase I treatment to remove residual DNA*

Applications

Purified RNA ready to use in downstream applications such as:

1. *PCR*
2. *Real-time PCR*
3. *Microarray target preparation*
4. *Northern blotting*
5. *NGS analysis*

Performance

Total RNA from 1 x 10^6 Hela Cell Extract

No.	Kit	nanodrop ng/µl	260/280	260/230
1	Brand Q	207.15	2.08	1.86
2		182.85	2.07	1.78
3		174.90	2.11	1.63
4	Brand Z	171.52	2.03	2.24
5		210.45	2.02	2.22
6		164.76	2.05	2.17
7	MagCore® triXact RNA Kit	264.69	2.04	2.11
8		250.61	2.02	2.17
9		237.44	2.03	2.17
10	Brand M	224.35	2.11	2.26
11		252.69	2.10	2.30
12		222.45	2.08	2.18

Table 1. Analysis of Cell RNA from MagCore® triXact Kit and others

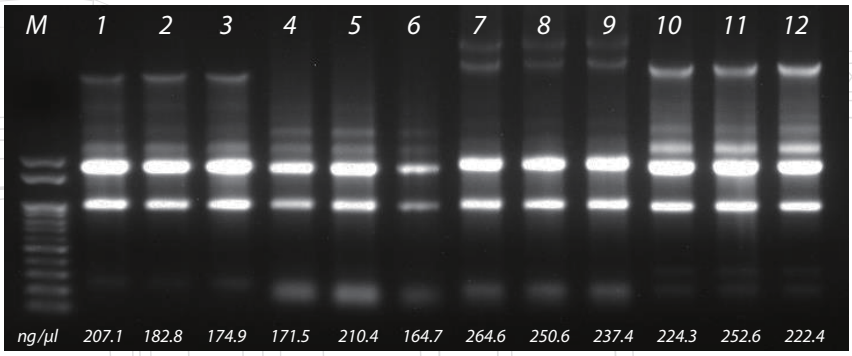


Fig 1. Gel Electrophoresis of RNA from 1 x 10^6 Hela Cell Extract

Total RNA from 400µl Human Whole Blood

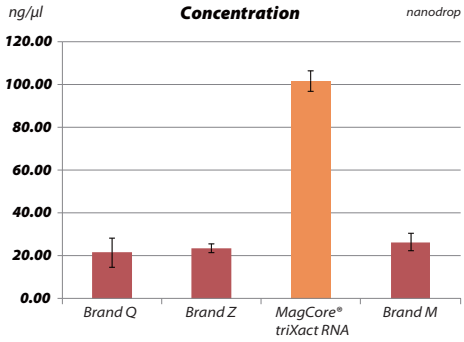


Fig 3. Concentration comparison of RNA from 400µl Human Whole Blood

No.	Kit	nanodrop ng/µl	260/280	260/230
1	Brand Q	28.77	1.99	1.69
2		20.88	2.06	0.31
3		15.02	1.89	0.85
4	Brand Z	21.36	1.97	1.82
5		23.32	1.98	1.48
6		25.50	1.71	1.26
7	MagCore® triXact RNA Kit	96.87	1.94	1.18
8		106.00	1.92	2.02
9		102.06	1.95	2.06
10	Brand M	27.03	1.91	0.73
11		22.09	2.35	1.23
12		30.13	2.08	0.37

Table 2. Analysis of Whole Blood RNA isolated by MagCore® triXact RNA Kit and others

No.	indicated anticoagulants	whole blood (ml)	nanodrop ng/µl	260/280	260/230
1	EDTA	0.4	40.08	2.03	1.69
2		0.8	189.10	1.96	2.09
3		1.2	256.82	1.94	2.12
4	Lithium Heparin	0.4	62.19	1.98	1.79
5		0.8	137.97	1.96	1.98
6		1.2	132.37	1.96	1.96
7	Sodium Citrate 3.2%	0.4	84.52	1.93	1.77
8		0.8	148.96	1.94	2.01
9		1.2	240.19	1.94	2.15
10	BD Vacutainer ACD Solution A	0.4	75.06	1.94	1.79
11		0.8	134.10	1.95	1.93
12		1.2	176.26	1.95	1.16

Table 3. Extraction efficiency of RNA from Human Whole Blood with various anticoagulants

Total RNA from 30 mg Fish Tissue

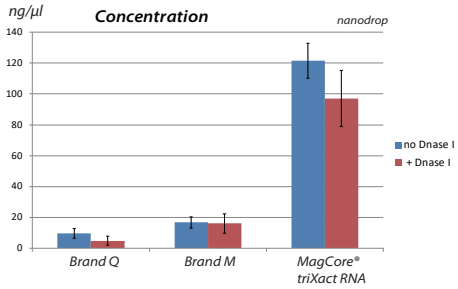


Fig 4. Concentration comparison of RNA from 30 mg Fish Tissue with/without DNase I treatment

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super / HF16 Plus / Plus II			MagCore® HF16 / Compact		
	Cat No. 24 preps	Cat No. 72preps	Running Time	Cat No. 24 preps	Cat No. 72preps	Running Time
631 MagCore® triXact RNA Kit For total RNA extraction from cultured cells, human whole blood and animal tissues Contents: Pre-Filled Cartridges, RB Buffer, RBC Lysis Buffer, Filter column Set, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 12 months						
	MRX-01	MRX-03	48min (without DNase I treatment; starting volume: 400µl) 81min (with DNase I treatment; starting volume: 400µl) *optical detection is not recommended	MRX-01	MRX-03	58min (without DNase I treatment; starting volume: 400µl) 73min (with DNase I treatment; starting volume: 400µl) (Applicable models: HF16, Compact)

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
DNase I Set	For 36 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 1 vial, 1 ml RNase-Free Water x1, 15 ml DNase I Reaction Buffe	DN036
	For 96 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 2 vial, 1 ml RNase-Free Water x2, 30 ml DNase I Reaction Buffer	DN096

FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR

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