

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	Cultured Cells	Animal Tissue	Plant Tissue	Bacterial/Sputum	Swab	FFPE	Stool	Forensic Specimens	
																			24 preps
Genomic DNA	101 MagCore® Genomic DNA Whole Blood Kit (Speedy installation)	MGB400-01 MGB400-01SP		MGB400-02 MGB400-02SP	■	■													
	102 MagCore® Genomic DNA Whole Blood Kit		MGB400-03 MGB400-03SP		MGB400-04 MGB400-04SP	■	■												
	104 MagCore® Genomic DNA Large Volume Whole Blood Kit (1.2 ml)				MGB1200 MGB1200SP	■													
	105 MagCore® Plasma DNA Extraction Kit (1.2 ml)				MPD1200 MPD1200SP		■	■		■									
	115 MagCore® Plasma DNA Extraction Kit (4 ml)				Coming Soon		■	■		■									
	106 MagCore® Genomic DNA Whole Blood Kit (For Genotyping)		MGB400-07 MGB400-07SP		MGB400-08 MGB400-08SP	■													
	110 MagCore® Cultured Cells DNA Kit		MCC-01 MCC-01SP		MCC-02 MCC-02SP						■								
	301 MagCore® Genomic DNA Plant Kit		MGP-01 MGP-01SP		MGP-02 MGP-02SP								■						
	401 MagCore® Genomic DNA Tissue Kit		MGT-01 MGT-01SP		MGT-02 MGT-02SP							■			■	■	■	■	■
	405 MagCore® Genomic DNA FFPE One-Step Kit		MGF-01 MGF-01SP	MGF-03 MGF-03SP												■			
	406 MagCore® Forensic DNA Direct Kit			MFC-03SP												■			■
	502 MagCore® Genomic DNA Bacterial Kit		MBB-01 MBB-01SP		MBB-02 MBB-02SP										■				
Viral Nucleic Acids	201 MagCore® Viral Nucleic Acid Extraction Kit	MVN400-01 MVN400-01SP		MVN400-02 MVN400-02SP			■	■	■										
	202 MagCore® Viral Nucleic Acid Extraction Kit (Low PCR Inhibition)		MVN400-03 MVN400-03SP		MVN400-04 MVN400-04SP		■	■	■										
	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 MVN1200SP		■	■	■										
Total RNA	601 MagCore® Total RNA Whole Blood Kit		MRN-01 MRN-01SP		MRN-02 MRN-02SP	■													
	610 MagCore® Total RNA Cultured Cells Kit		MRC-01 MRC-01SP		MRC-02 MRC-02SP					■									
	631 MagCore® triXact RNA Kit	MRX-01 MRX-01SP		MRX-03 MRX-03SP		■				■	■								

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.

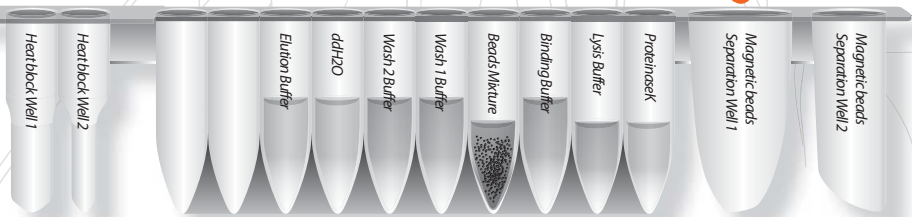
MagCore® Nucleic Acid Extraction Kits contain all reagents and consumables needed for 36, 72 or 96 nucleic acid isolation reactions. The consumables consist of reagent cartridges, individually packaged tip sets, sample tubes and elution tubes.

Tip Design

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

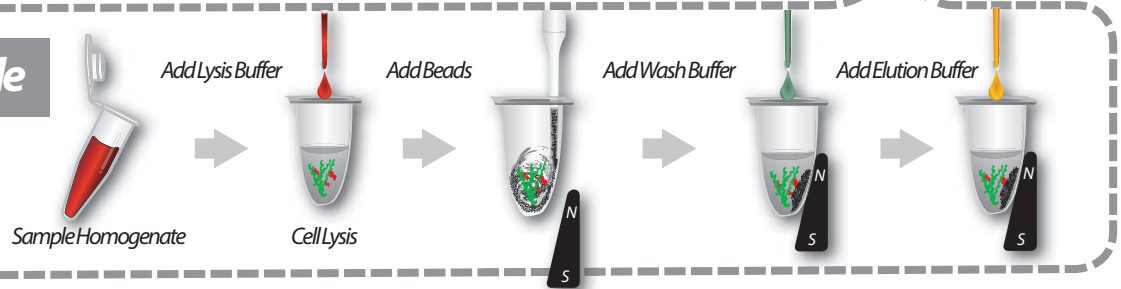


RBC Cartridge



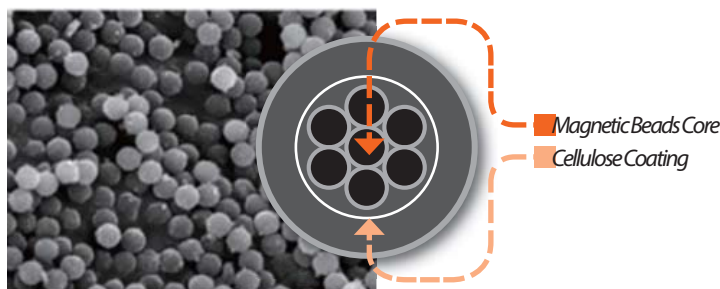
Each cartridge has 14 positions available with 10 sealed wells and 2 heating chambers.

Extraction Principle



MagCore® Worldwide Patented Magnetic Beads

Our design: multiple core inside, cellulose coating.



Particlerange	~20µm (in water)
VSM	~40emu/g
Cellulose%	~50%
Core size	~150nm
Core VSM	~80emu/g
Core material	Fe ₃ O ₄
Bead Binding capacity	1 mg beads bind ~300µg <i>Calthymus</i> DNA ~350µg human placenta DNA



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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:

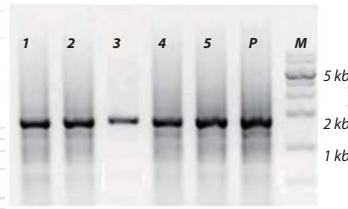
1. PCR and real time PCR
2. Genotyping or sequencing
3. SNP, STR



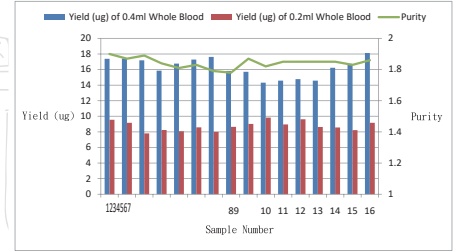
Performance

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(4m)	1.95	106.02
4. Sodium Fluoride	1.91	113.16
5. Lithium Heparin(9m)	1.95	101.34

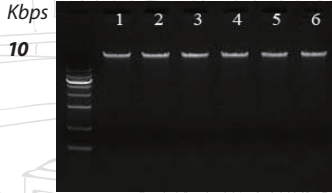
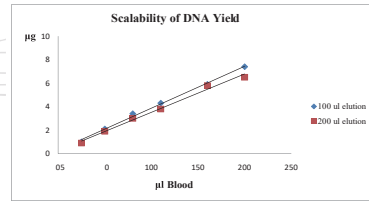


Consistent yield and purity



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 A₂₆₀ measurement.

Linear Increase in DNA yield



MagCore® Automated Nucleic Acid Kits Specification

MagCore® Super/HF16 Plus/Plus II

MagCore® HF16/Compact/HF48

Cartridge Code	MagCore® Super/HF16 Plus/Plus II			MagCore® HF16/Compact/HF48			Running Time
	Cat No.	Cat No.	Cat No.	Cat No.	Cat No.	Cat No.	
	36 preps	72 preps	96 preps	36 preps	72 preps	96 preps	

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

MGB400-01SP	MGB400-02SP	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)
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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

MGB400-03SP	MGB400-04SP	39 min (sample volume:200 μl) 50 min (sample volume:400 μl)	MGB400-03	MGB400-04	44 min (sample volume:200 μl) 55 min (sample volume:400 μl)
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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

MGB1200SP	MGB1200	76 min (sample volume:1200 μl)	MGB1200	83 min (sample volume:1200 μl)
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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

MGB400-07SP	MGB-400-08SP	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)
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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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