

WizMag™ Blood DNA

User Manual

Ver 2.0

REF W7010 | W7011 | W7012 | W7013

For *in vitro* diagnostic use.



INTENDED USE

The WizMag™ Blood DNA kit is designed to be used on the CLEO™ AP16 Nucleic Acid Extractor System for simple and easy purification of total DNA from whole blood or its derivatives. This kit utilizes advanced magnetic-silica technology to purify high-quality DNA and up to 200 µL of mammalian whole blood can be processed per prep in less than 40 minutes. Purified DNA is free of enzyme inhibitors and other contaminants, and highly suited for downstream applications such as PCR-based or enzyme-based reactions.

KIT CONTENTS

Contents	W7010	W7011	W7012	W7013	Storage
No. of preparation	64	192	32	96	Room Temperature (15-25°C)
Pre-packed 96-well Plate	4 ea	12 ea	-	-	
Pre-packed 6-well Strip	-	-	32 ea	96 ea	
Plunger	8 ea	24 ea	8 ea	24 ea	
Buffer PKR	1.5 mL	6 mL	1 mL	3 mL	
Proteinase K *	14 mg x 2	42 mg x 2	14 mg	42 mg	
Blank solution A	500 µL	500 µL	500 µL	500 µL	

This kit is delivered under ambient conditions. When being used immediately on arrival, all the components can be stored at room temperature (15 - 25 °C). But if the kit is going to be stocked for a long time, Proteinase K should be stored at 2 - 8°C for optimal conservation. Long exposure to heat sources can deteriorate the performance of the kit significantly.

* After dissolving, store proteinase K solution at 2 - 8°C for optimal conservations.

QUALITY CONTROL ANALYSIS

In accordance with Wizbiosolutions Inc. ISO 13485-certified Quality Management System, each lot WizMag™ Blood DNA kit is tested against predetermined specifications to ensure consistent product quality.

RECONSTITUTION OF PROTEINASE K

Before the first experiment, dissolve completely Proteinase K with Buffer PKR, as indicated on the product label. Do not vortex when dissolving. Store the reconstituted Proteinase K solution at 2 - 8°C.

PRECAUTIONS

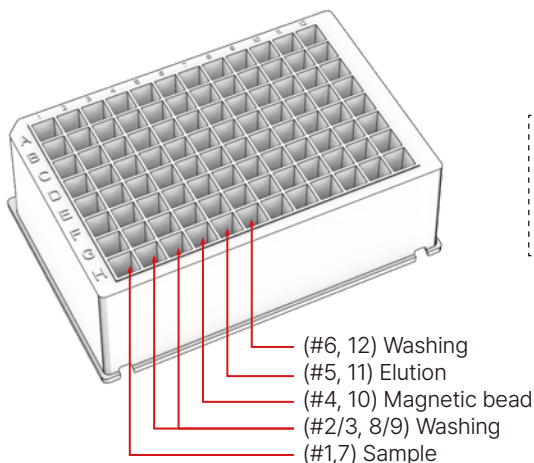


- This product is reserved exclusively for *in vitro* diagnostic purposes.
- Intended for single use only. Do not reuse.
- Check the expiration date on the box. Do not use it after the expiration date.
- Wear protective clothing, and use disposable gloves, goggles, and a mask.
- Do not eat, drink or smoke in areas where samples or test reagents are being used. Once you finish the test wash your hands.
- Specimens must be treated as potentially infectious as well as all reagents and materials that have been exposed to the samples and handled in the same manner as an infectious agent.
- Regular decontamination of commonly used equipment is recommended, especially micropipettes and work surfaces.

- This product contains irritants that are harmful when in contact with skin or eyes, or inhaled or swallowed. Care should be taken when handling this product.
- Some of the reagents in the 96-well Plate contain chaotropic which can form highly reactive compounds when combined with bleach. Do NOT add bleach or acidic solutions directly to the sample-preparation waste.
- Any significant incidents related to the product should be notified to the competent authorities and manufacturers.
- Do not use it if the package is damaged.

COMPOSITION OF THE PRE-PACKED 96-WELL PLATE (W7010 | W7011)

A total of 16 samples can be simultaneously processed per plate.



Columns 7 - 12 in the right half of a 96-well plate have the same composition as columns 1 - 6 in the left half.

COMPOSITION OF THE PRE-PACKED 6-WELL STRIP (W7012 | W7013)



- (#1) Sample
- (#2/3) Washing
- (#4) Magnetic bead
- (#5) Elution
- (#6) Washing

PROTOCOL

A. Setup of program (For CLEO™ AP16 & AP48 devices, preset program can be used.)

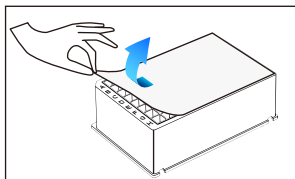
Edit and run the experiment program as follows:

No.	1	2	3	4	5	6	7	8
Well #	4	1	2	3	4	6	5	4
Step	Beads	Lysis	Wash	Wash	Wash	Wash	Elute	Discard
Volume(μL)	750	700	750	750	750	750	80	750
Wait time	-	-	-	-	-	-	03:00	-
Mix time 1	00:20	15:00	00:15	00:10	01:00	01:00	00:15	00:15
Mix speed 1	Medium	Fast	Bottom	Bottom	Bottom	Fast	Bottom	Bottom
Mix time 2	-	-	00:15	00:20	00:20	-	00:45	-
Mix speed 2	-	-	Fast	Fast	Fast	-	Fast	-
Mix loop	1	1	4	3	2	1	3	-
Collect time	00:20	00:25	00:20	00:20	00:20	00:20	01:00	-
Collect speed	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Normal
Temperature		65°C					60°C	

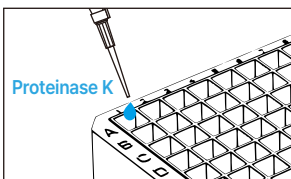
B. Sample Preparation

Sample type	Preparation
Mammalian whole blood	Use 200 μL of whole blood or buffy coat as sample
Nucleated blood	Add 190 - 195 μL of 1x PBS to 5 - 10 μL of nucleated blood to make 200 μL of sample.

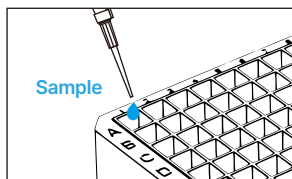
C-1. DNA extraction procedure (W7010, W7011)



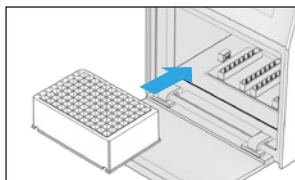
1. Carefully peel off the film of the 96-well Plate not to cross-contaminate.



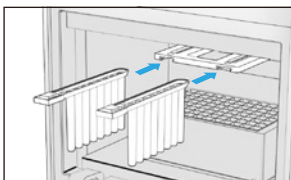
2. Add 20 μ L of Proteinase K solution into the each first well (#1,7)



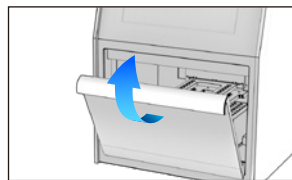
3. Add 200 μ L of the sample into the each first well (#1,7)



4. Mount the 96-well Plate on the CLEO™ AP16 carefully.

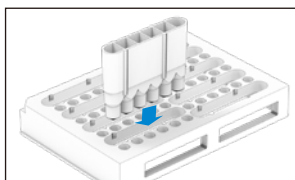


5. Insert a Plunger all the way into the socket above the 96-well Plate.

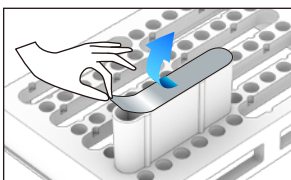


6. Close the front door of the instrument.

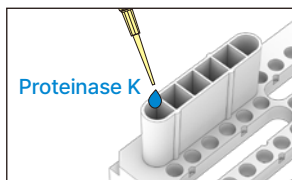
C-2. DNA extraction procedure (W7012, W7013)



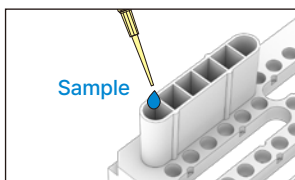
1. Mount the 6-well Strip onto the Strip Adapter Plate.



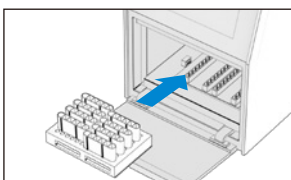
2. Carefully peel off the film of the 6-well Strip not to cross-contaminate.



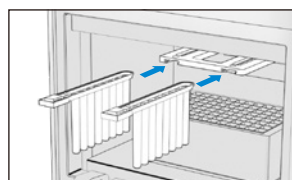
3. Add 20 μ L of Proteinase K solution into the each first well (#1)



4. Add 200 μ L of the sample into the each first well (#1)



5. Mount the 6-well Strip Adapter Plate on the CLEO™ AP16 carefully.



6. Insert a Plunger all the way into the socket above the Plate.

7. Close the front door of the instrument.
8. Select **MENU ► DNA ► Blood DNA** on the screen.

















8. Press **'RUN'** button on the screen.
9. After the alarm finishes, open the door and carefully remove the Plunger.
10. Detach the 96-well plate (or the Strip Adapter Plate) from the machine carefully.
11. Transfer the 60 - 80 μ L eluate of each fifth well (#5, 11) into a new 1.5 mL centrifuge tube.
NOTE : The volume of eluate can be decreased slightly during the process.
12. Dispose of 96-well Plates (or 6-well Strip) and Plunger used in the test according to local or national waste disposal methods.

TROUBLE SHOOTING GUIDE

Problem	Possible causes	Recommendations
Low yield	Low cells in the starting sample	Some samples may have a low population of cells, and some whole blood may contain low numbers of white blood cells. When the cell mass is very low, an addition of carrier RNA (5-10 ug/sample) into the sample can be helpful for the recovery of DNA.
	Too much sample volume used	Do not overload the sample. Keep the volume of a sample as a procedure.
	Degenerated Proteinase K	Degenerated Proteinase K may cause inefficient lysis. Proteinase K solution should be stored at 2-8°C for maintenance of proper activity.
Low purity or the colored residue in eluate	Incomplete removal of hemoglobin	In case of DNA preparation from a certain animal's blood or improperly stored blood, it is hard to remove hemoglobin from their blood. Use a freshly harvested sample or try again with a half volume of whole blood. Make 200 μ L with 1x PBS.
Degraded DNA	Starting sample is too old or improperly stored	Too old or improperly stored samples have degraded DNA. Use a fresh sample.
Inconsistent recovery of DNA	Contamination between reagent wells	The reagent in the well may evaporate and form a deposit on the film during storage, which may cause contamination between wells when the film is removed. Prepacked plates or tubes always should be stored in proper condition. Before removing the film from the plate or the tube, it is recommended to shake off the deposit on the film while holding the plate or the tube tightly.

SYMBOL GLOSSARY

	Catalogue number		Manufacturer		Use-by date
	Batch code		Do not re-use		Temperature limitation
	in-vitro diagnostic use		Instructions for use		Keep away from sunlight
	Contents sufficient for <n> tests		Caution		Keep dry
	Do not use if package is damaged		Unique Device Identification		

ORDERING INFORMATION

Product	Cat No.	Package	Note
WizMag™ Blood DNA	W7010	64 Prep	16 prep/run
	W7011	192 Prep	
	W7012	32 Prep	Single prep
	W7013	96 Prep	
CLEO™ AP16 Nucleic acid Extractor	CL2016	1 system	1-16 sample
CLEO™ AP48 Nucleic acid Extractor	CL2048	1 system	1-48 sample

MFDS License No. : IVD-23-833



Technical Support



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