



Magratron System 8Lx (7 ml Whole Blood Sample)

Automated Nucleic Acid Isolation and Purification System

QUICK MANUAL

~ Genomic DNA Purification Whole Blood ~

Protocol name: **MagDEA DNA 7000 Blood 8Lx**

<Target>

This protocol for 7.0 ml sample, which can start from 7.0 ml vacutainer tube (VENOJECT II, TERUMO), extracts genomic DNA from whole blood sample. Simple steps to set up consumables and reagent in the instrument. Easy operation to use the system also helps the user's hard work.

<Operation Time>

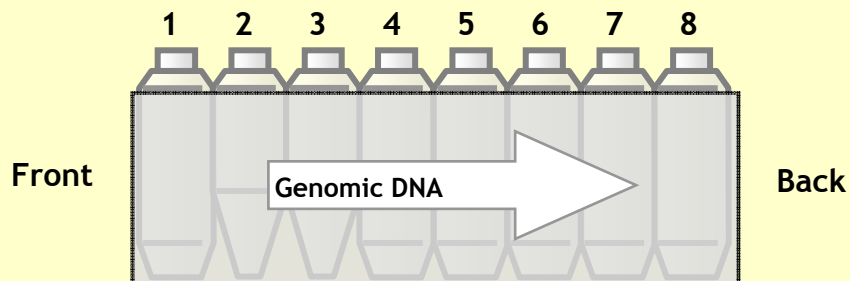
Operation time : Approx. 70 min

<Material prepared by User>

- 2-prppanol (Isopropyl alcohol)
- 2.0 ml screw cap tube (Recommended; SARSTEDT, Code 72.693)
- 30 ml tube (Recommended; SARSTEDT, Code 55.517)

<Reagents>

Load reagent cartridge this way



MagDEA DNA 7000 Blood (8Lx) (Code No. E7002)

Fig.1 Bottle arrangement

Table 1. Reagent Composition

Bottle No.	Bottle size	Reagents	Volume (ml)
1	35 ml	Empty	-
2	20 ml	Proteinase K Solution	1
3	20 ml	Lysis Solution	5
4	35 ml	Solution 1	4
5	35 ml	Magnetic Beads	1
6	35 ml	Solution 2	15
7	35 ml	Solution 3	10
8	35 ml	Elution buffer (DW)	30

*** Add 35 ml of 2-propanol by user**

Recommended 2-propanol

2-Propanol ACS reagent, >99.5% (190764, SIGMA-Aldrich)
 2-Propanol (JIS Special Grade) (166-04831, 166-04836, Wako Chemicals)
 It is preferable that the container of the 2-propanol is the glass bottle.

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Store this reagent at room temperature (20-30°C).
Avoid high temperature, high humidity, and vibration.
Preserve this reagent with the aluminum seal up.

<Preparation of the reagents and consumables>

Set all consumables and reagents

- Set 2 ml tube for the elution and two 30 ml tubes in 8Lx. (See the fig. 2)
- Carefully poke aluminum-seal of 1st bottle in the cartridge to make a hole (using tip).
- Then, pour 35 ml of 2-propanol (Isopropyl Alcohol) into the bottle.
- After pouring 2-propanol, load the reagent cartridge in the instrument. (See the fig. 2)
- Select and run the protocol of MagDEA DNA 7000 Whole Blood.



- Syringe Tip
- Heating block 2
(Empty 30ml Tube)
- Heating block 1
(Empty 30ml Tube)
- Reagent Cartridge
- 7ml Sample Vacutainer
(VENOJECT II, TERUMO)
- Elution Tube (2.0ml tube)

Fig.2 8Lx Stage Layout

Phenomenon	Possible causes / Comments
Low yield	<p>< <u>Sample Condition</u> ></p> <p>Check if temperature or place stored were adequate, or the run was performed after it became to room temperature. Try another run using new fresh samples. Also, stored samples in refrigerator may give lower yields depending on the period.</p> <p>< <u>Storage condition of reagents</u> ></p> <p>Check temperature and circumstance of storage place for any abnormality. Do not allow reagents to freeze. Vibration to the magnetic particles may affect the reagents under excessive vibration.</p>
Inadequate PCR result	<p>< <u>Impurity of original sample</u> ></p> <p>Impurity of original sample (whole blood etc.) may cause detrimental effects on PCR.</p>
Coloration of eluate	<p>< <u>Contamination by magnetic particles</u> ></p> <p>The eluate may appear brown-colored due to contamination by magnetic particles. For absorbance determination and various assay such as PCR, the use of centrifuged supernatant(1-2 min, 5,000-10,000g) is recommended.</p>