AutoXT CLiNiC-Q multi DNA Kit

RUO REF 17601-48 Σ 48 REF 17601-96 Σ 96 15℃ 25℃

INTRODUCTION

The AutoXT CLiNiC-Q multi DNA Kit is used with the Miracle-AutoXT Nucleic Acid Extraction System (IMC-NC15PLUS) to mechanical pre-lysis method is applied to purify gDNA from Gram-positive bacteria, yeast and various specimens such as tissues, blood, and cell, etc.. (Total) Genomic DNA is easily bound to the surface of the magnetic beads and release using a proprietary buffer system.

To run the suitable protocol (Bacteria fast), you should have Miracle-AutoXT ver. 1.3 (or higher version) firmware installed on your Miracle-AutoXT Nucleic Acid Extraction System, and you should use the Miracle-AutoXT high strength magnetic rod and Plunger Tip. The Total DNA purification procedure is a simple method with the minimal handling before automated purification.

The eluted fraction is used to generated high-quality Total genomic DNA suitable for use in downstream applications such as PCR, real-time PCR, etc.. The Miracle-AutoXT Nucleic Acid Extraction System Instruments can process from 1 to 48 (96) samples in under an 30 min.

INTENDED TO USE

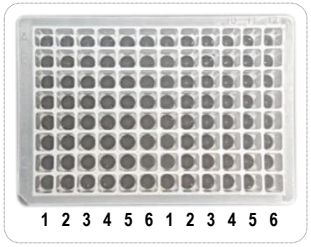
For research purpose only. Not intended for the diagnosis, prevention, or treatment of a disease.

PRODUCT COMPONENTS AND STORAGE CONDITIONS

Cat. No.	Product	Type	Size
17601-48	AutoXT CLiNiC-Q multi DNA Kit (Individual)	Cartridge	48 T
17601-96	AutoXT CLiNiC-Q multi DNA Kit (Well plate)	Plate	96 T

※ Cartridge (Individual) Type

※ Plate Type



[Contents]
- 1 : Lysis Buffer
- 2 : Washing Buffer 1
- 3 : Washing Buffer 2
- 4 : Washing Buffer 3
- 5 : Bead Solution
- 6 : Elution Buffer
- RNase A (Lyophilized powder)
- Proteinase K (Lyophilized powder)

[Individual type]
- 48 Prefilled Cartridges
- 12 Plunger Tips
- RNase A, Proteinase K (each 1 vial)

[Plate Type]
- 6 Prefilled Well plates
- 12 Plunger Tips
- RNase A, Proteinase K (each 2 vial)

[Storage Conditions]
Shipping and Storage dry at Room temperature

CONSIDERATION BEFORE USE

- **Lyophilized RNase A** : Dissolve the RNase A in 0.9 ml of pure D.W
- **Lyophilized Proteinase K** : Dissolve the Proteinase K in 1.1 ml of pure D.W

⚠ The lyophilized RNase A and Proteinase K can be stored at room temperature (15-25°C) until the kit's expiration date. Reconstituted enzyme should be immediately stored at -20°C. These solutions are stable at -20°C for up to 24 months and 20 times frozen thawing until the kit's expiration date.

※ Storage Conditions

Upon receipt, store the kit components at room temperature (15~25°C) for up to 24 months without showing any reduction in performance and quality.

※ Safety Information

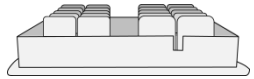
The reagent Cartridges or Plates contain ethanol which is flammable. Guanidine thiocyanate and Guanidine hydrochloride (which are components of the Lysis Buffer and Washing Buffer 1) are harmful and irritants.

Always wear protective gear during handling chemical materials and the test should be handled by professionally trained person.

MATERIALS REQUIRED BUT NOT PROVIDED

- Miracle-AutoXT Nucleic Acid Extraction System

- Cartridge Rack (Individual type only)



- Pipette and air barrier tip
- Disposable gloves
- 1.5 ml micro tube
- General lab equipment

NOTICE

1. For research purpose only. Not intended for the diagnosis, prevention, or treatment of a disease.
2. Always wear protective gear during handling chemical materials and the test should be handled by professionally trained person.
3. Be careful and prevent the contamination and direct contact from the test samples .
4. Surface of workspace and pipette should be regularly sterilized by 10% bleach solution.
5. All the waste should be sterilized before discarding.
6. The contamination should be considered very seriously. The work station should be kept with extreme cleanness not to have false-positive. Use RNase WiPER (iNtRON. Cat. 21131) to clean the desk or 1/20 diluted household bleach can be used alternatively.

PRODUCT WARRANTY AND SATISFACTION GUARANTEE

All products are undergone extensive quality control test and are warranted to perform as described when used correctly. Immediately any problems should be reported. Satisfaction guarantee is conditional upon the customer providing full details of the problem to iNtRON within 60 days, and returning the product to iNtRON for examination.

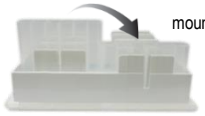
PROTOCOLS

※ Before You Begin

1. **Power on the Miracle-AutoXT Nucleic Acid Extraction System Instrument.** [Note] It is recommended that the equipment is maintained through ultraviolet rays prior to use.
2. **A suitable number of Plunger Tip is combined into the tip socket.**

[Correct way of inserting Plunger Tip in the tip socket of device]

3. **Attach the Cartridges to Cartridge Rack (or prefilled Well Plate), then mount on the Block with attention to the orientation.**



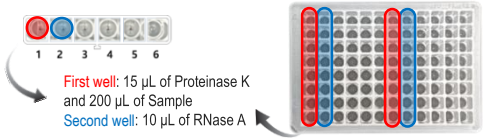
[Combined Prefilled Cartridges to Rack for individual preparation]

※ Sample Preparation

1. **Cells :** 5 x 10^6 cells, resuspend the pellet with 200 µL of media or buffer.
2. **Swab :** To collect swab sample, scrape the swab to the specimen and air-dry the swab at least 2hr after collection. Then resuspend the swab with 500 µL of PBS.
3. **Tissue :** Grind the 10 ~ 50 mg of tissue with 200 µL of PBS Buffer
4. **Body fluids :** 200 µL of specimen

※ genomic DNA Extraction

1. Peel of the cover seal from the AutoXT CLiNiC-Q multi DNA Kit
2. Add 15 µL of Proteinase K reconstituted solution to the each first well (#1)
3. Add 10 µL of RNase A reconstituted solution to the each second well (#2)
4. Add the 200 µL of Specimen to the each first well (#1)



[The adding well-position of the enzyme and specimen]

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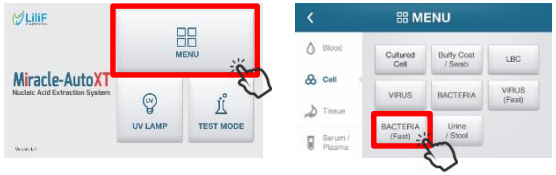
English (영문 英語)

3. **Insert Prefilled Well-Plate or Cartridge Rack combined with Prefilled Cartridge on Heating Tray as shown figure below. Make sure the position of the diagonally cut edge of plate forward on the Heating Tray. If it is inserted incorrectly or upside down it may cause operating error and extraction may not work.**

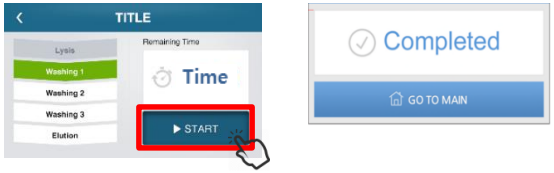
[Correct way of inserting Heating Tray in the device]

4. **Close the front door and ready to start.**
5. **Press the 'menu / Cell' button on the touch display of the Miracle-AutoXT Nucleic Acid Extraction System to select the extraction type.**
6. **Select 'BACTERIA (Fast)' icon for gDNA extraction as shown figure below.**



7. **Press the 'Start' button to perform the extraction.**

[Note] It will be started automatically and indicates the remaining time on the screen (Refer to Figure below). After completion, it gives a beep. You can check the progress of step on window of touchscreen. Current process is indicated with blue color icon and remained process is presented with white icon. Time on the LCD screen does not run during magnetic rod positioning. There are approximately 3~4 minutes of magnetic rod positioning during the operation. The instrument can be forcibly stopped by 'Pause' button. The whole operation is initialized if home button on right top corner of LCD screen in below Figure is pressed; LCD screen returns to home and magnetic rod moves to its original position. Opening the door during operation put it on hold and re-activated once closed.



8. **After completion of device working, transfer the 60~80 µL of Elution fraction (well position 6) to a new 1.5 ml Microtube. Then store the gDNA at appropriate temperature (4ºC : 1~2 days, -20ºC : 1~4 weeks, -70ºC : 1~6 month).**

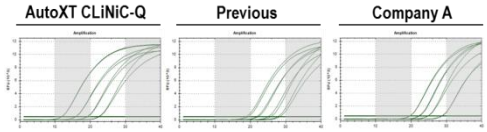
TROUBLE SHOOTING GUIDE

Problem	Possible causes and comments
Lower nucleic acid recovery than expected	• Sample homogenization was incomplete. • Incomplete homogenization samples results is loss of DNA yield within particulates and clump of debris
	• The starting samples were compromised. Ensure that samples (e.g., for customer-provided internal controls) were collected, shipped and stored according to recommended guidelines.
	• The Miracle-AutoXT Nucleic Acid Extraction System Instrument was set for the wrong method. Ensure that the correct method is chosen in Bacteria fast Mode.
	• Check that an Plunger Tip was added to the cartridge. Ensure that all cartridges are snapped into the rack properly before processing.
	• Check amount and storage conditions of starting materials
	• Check and ensure the block set temperature at 60 ºC.
Poor amplification	• Paramagnetic particle carryover may cause interference in amplification reaction. Remove particles in Elution Tube by centrifugation.
Cross-contamination	• Avoid splashing when adding lysates to cartridges. Cartridges may be removed from the rack for sample addition to minimize contamination of adjacent cartridges.se fresh plastic wares for each sample to prevent sample-to sample contamination.

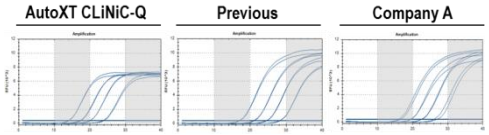
TECHNICAL INFORMATIONS

※ Comparative Test with Previous Kit & other company

- **Yeast (*C.albicans*)**

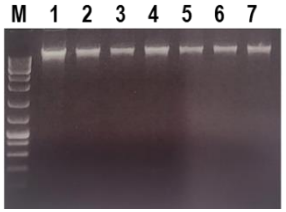


- **Gram positive bacteria (*L.monocytogenes*)**



To compare and observe the extraction efficiency of genomic DNA from Yeast(*C.albicans*) and Gram (+) Bacteria(*L.monocytogenes*), we conducted an extraction comparison test between AutoXT CLiNiC-Q multi DNA Kit and existing similar and other-company products. The cultured sample was 10-fold serial dilution by 4 stages and real-time PCR showed relatively fast amplification values and excellent DNA extraction effects.

※ Reproducibility Test Data



[Lane Information]

Lane M, DNA Marker; (Lane 1~4 : Gram negative bacteria) Lane 1, *P.aeruginosa*; Lane 2, *S.enterica*; Lane 3, *S.flexneri*; Lane 4, *E.coli*; (Lane 5,6 : Gram positive bacteria) Lane 5, *L.monocytogenes*; Lane 6, *S.aureus*; (Lane 7 : Yeast) Lane 7, *C.albicans*

Salmonella, *Sigella*, and *E. coli* were used as Gram-negative bacteria for evaluated the extraction performance, *L.monocytogenes* and *S.aureus* were used as Gram-positive bacteria, and *C.albicans* was used as yeast.
As a result of culturing and extracting various types of pathogenic cells, satisfactory yield and purity values were confirmed, and clear target bands were confirmed through electrophoresis.

RELATED PRODUCTS

Cat. No.	Product	Size
17188-48	AutoXT Total gDNA Kit (Individual)	48 T
17188-96	AutoXT Total gDNA Kit (Well plate)	96 T
IMC-NC15PLUS	Miracle-AutoXT Nucleic Acid Extraction System	1 set
IMC-NC15PLUS.rack	Cartridge Rack (for Individual type)	10 ea
IMC-NC15PLUS.TIP	Plunger Tip	96 ea

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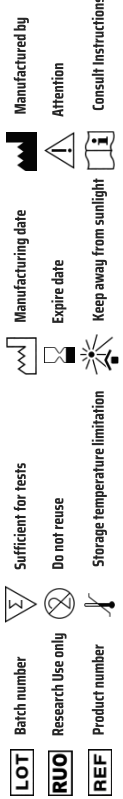
EXPLANATION OF SYMBOLS



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