HIMEDIA
HiGenoMB®
Unzipping Genes

InstaNX™

Automated Nucleic acid purification system

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For Life is Precious

Salient Features :

- Newly designed innovative Super -S membrane technology
- Easy-to-use and easy-to-maintain system operation
- Wide range of applications for DNA, RNA and Viral DNA/RNA extraction from various types of samples
- Ready to use with the prefilled reagent cartridges
- Stream-line workflow to avoid cross contamination
- Integrated UV light for sterilization of internal parts of the machine
- It has a provision for USB port for scanning protocol

Description:

The Insta NX™ Instrument is a fully automated nucleic acid purification system. Utilizing the Innovative Super -S membrane column method, it can purify nucleic acids with high yield and purity from a wide range of samples. In addition, through our Innovative Trinity Technology, the purification procedure can be done within a small and straight-line cartridge without centrifuge and vacuum pump. Up to 12 samples can be processed in a single run. Also, contamination-free optimum extraction can be achieved with the use of pre-filled reagents, disposables (Trinity Technology) and integrated UV sterilization.

The automated steps performed by the Insta NX™ Instrument include :

- Sample lysis in the presence of a specially formulated Lysis Buffer on the heating block.
- Binding of nucleic acids to Super -S membrane in the column.
- Washing of the bound target molecules to remove other cellular components.
- Elution of the DNA/RNA into the elution tubes.

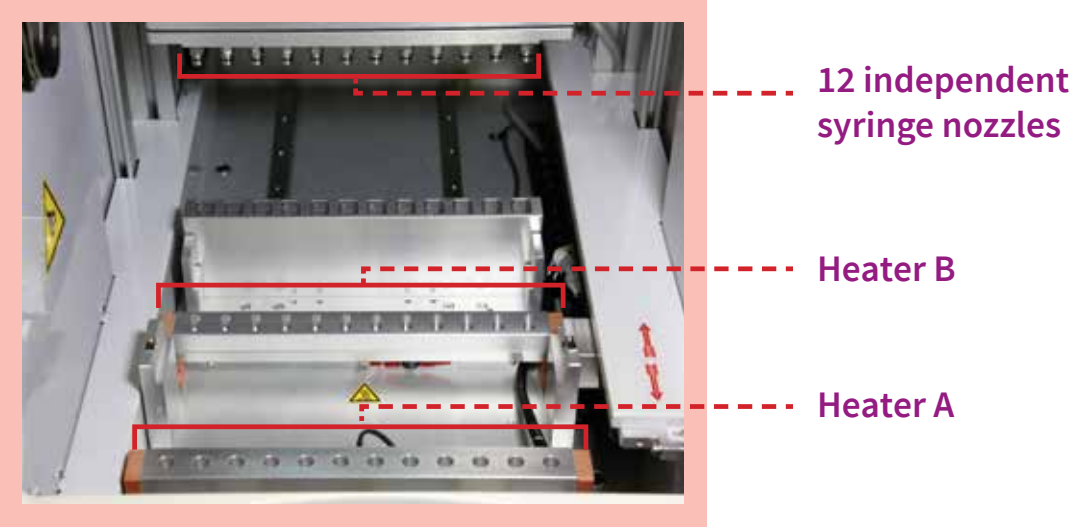
Product Intended Use:

The Insta NX™ Instrument is intended for use in combination with HiMedia kits to perform automated purification of nucleic acids. The nucleic acid purified using the Insta NX™ Instrument is suitable for direct downstream analysis by standard amplification methods.

Test Parameters :

Sample	Pre- processing Sample volume	Pre- processing time	Processing time	Yield	Purity
Clinical samples					
Dengue Serum	140 µl	5 mins		10-50 ng/µl	
Whole blood	200 µl	5 mins		10-50 ng/µl	
Urine sample	5 ml	10 mins		10-50 ng/µl	
Stool sample	250 mg	45 mins		10-50 ng/µl	
Sputum sample	500 µl	40 mins		10-50 ng/µl	
Plasma	200 µl	5 mins		10-50 ng/µl	
CSF	200 µl	45 mins		10-50 ng/µl	
HPV Endocervical sample	200 µl	5 mins		10-50 ng/µl	
Food Samples and Beverages					
Spice mix	1.5 ml	30 mins		-	
Milk powder	1.5 ml	30 mins		-	
Fruit juices	1.5 ml	30 mins	1hr 15 min	-	1.6 to 1.9WW
Whole milk	1.5 ml	30 mins		-	
Chocolates	1.5 ml	30 mins		-	
Water	400 µl	1 hr		10-50 ng/µl	
Chicken tissue	25 mg	5 mins (followed by 2 hrs of incubation)		10-50 ng/µl	
Pork Tissue / Fat	25 mg	5 mins (followed by 2 hrs of incubation)		10-50 ng/µl	
Seafood	25 mg	5 mins (followed by 2 hrs of incubation)		10-50 ng/µl	
Veterinary Samples					
Horse serum	200 µl	5 mins		10-50 ng/µl	
Goat	25 mg	5 mins (followed by 2 hrs of incubation)		10-50 ng/µl	
Environmental Samples					
Rice Root	80 mg	35 mins		10-50 ng/µl	
Sugarcane leaf	300 mg	45 mins		10-50 ng/µl	
Watermelon Seeds	200 mg	35 mins		10-50 ng/µl	
Onion Bulb	350 mg	35 mins		10-50 ng/µl	
Soil	250 mg	20 mins		10-50 ng/µl	
Forensic Samples					
Bone	200 mg	Day 1- Decalcification for overnight Day 2- 5 mins		10-50 ng/µl	
Tooth	200 mg	Day 1- Decalcification for overnight Day 2- 5 mins		10-50 ng/µl	
Buccal Swab	0.5 cm^2	20 mins		10-50 ng/µl	
Chewing Gum	0.5 cm^2	20 mins		10-50 ng/µl	
Insect Samples					
Honey Bee	50 mg	35 mins		10-50 ng/µl	
Miscellaneous					
Bacteria	1.5 ml	45 mins		10-50 ng/µl	
Fungus	300 mg	40 mins		10-50 ng/µl	

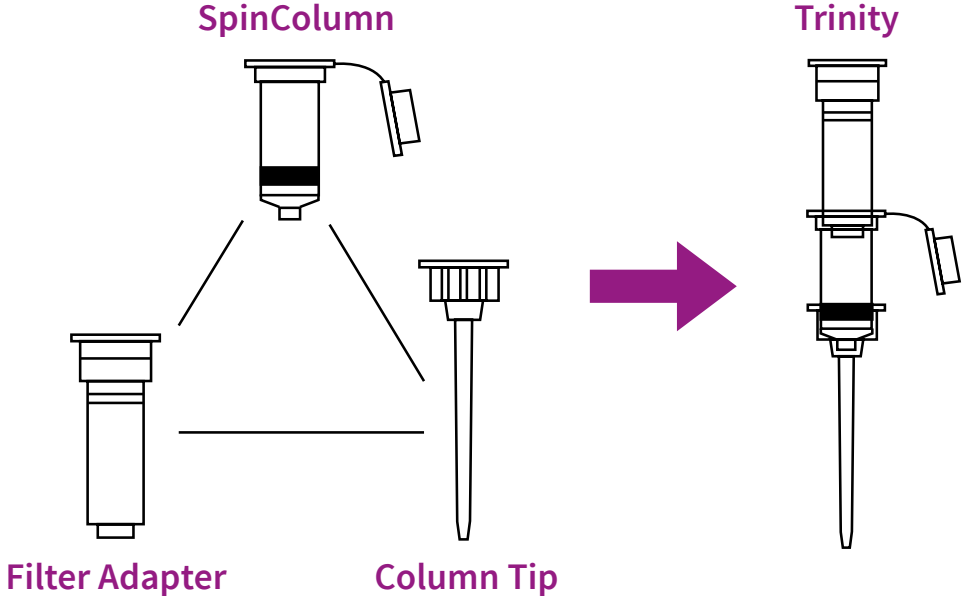
Worktable of Insta NX™



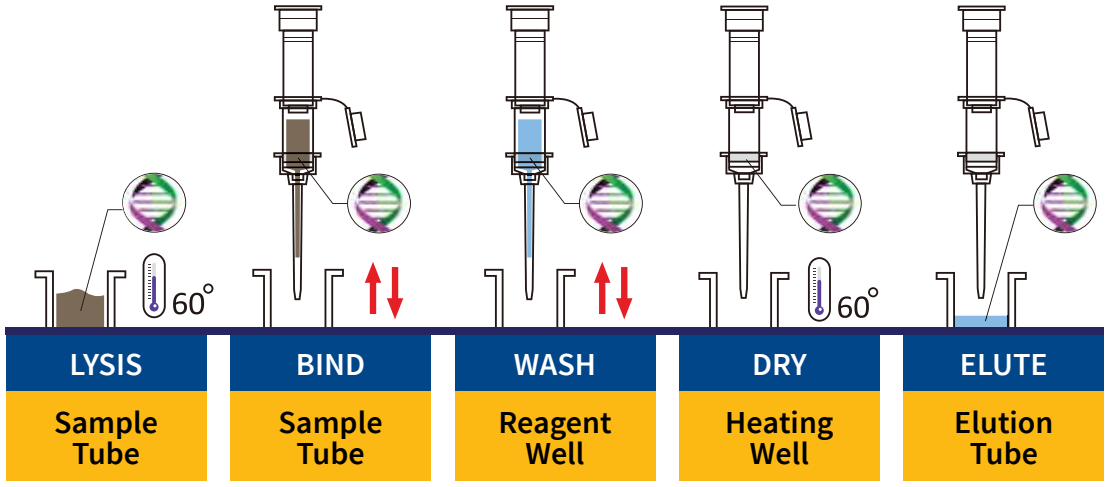
Trinity Technology

Our innovative technology to purify nucleic acids!

We have developed the Trinity, a combination of Super-S Column, Filter Adapter and Column Tip. The innovative Super-S column utilizes a Bi-directional flow technology to allow Automation of DNA and RNA extraction. Differential air pressure methology ensures an efficient flow of lysate, wash buffers and elution solutions to simultaneously obtain good yield and purity of extracted nucleic acids. A high quality DNA/RNA is obtained for further downstream analysis.



Streamline workflow



Setup worktable

1. Place cartridge

2. Place 1 ml Tip

3. Place Elution tube

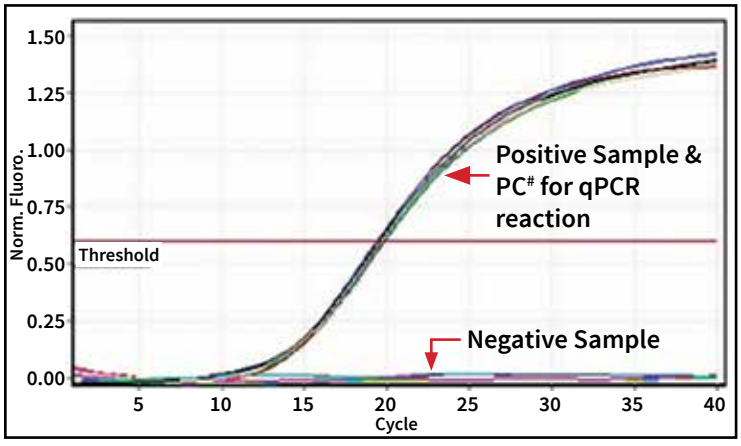
4. Place rack into system

5. Close the lid and Start run

Cross contamination free DNA/RNA in same run

No.	1	2	3	4	5	6	7	8	9	10	11	12
Sample	-	+	-	+	-	+	-	+	-	+	-	+

+ Positive Sample : Plasma sample with $7x10^6$ copies of HBV (mean of C_t* = 19.7)
- Negative Sample : Nuclease free water

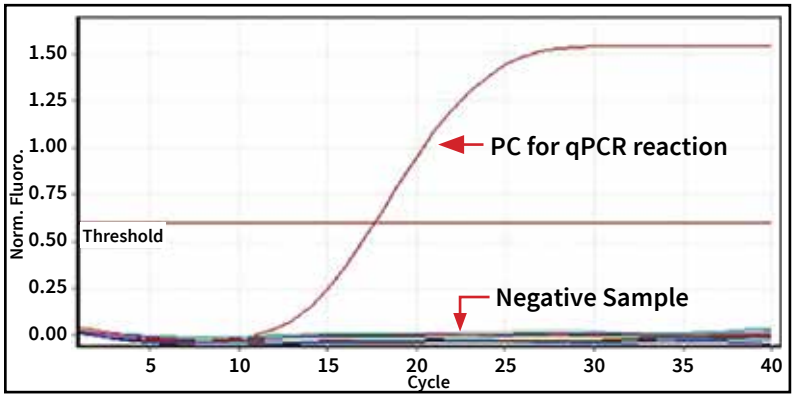


- Positive samples for HBV were placed in tubes labelled with even numbers and negative samples were placed in tubes labelled with odd numbers during the same run.
- qPCR was performed using DNA extracted from Insta NX.
- Only positive sample was amplified during qPCR.
- No Cross contamination was observed.
- Provision for UV sterilization of Insta NX to avoid cross contamination.

Cross contamination free DNA/RNA between different runs

No.	1	2	3	4	5	6	7	8	9	10	11	12
Sample	-	-	-	-	-	-	-	-	-	-	-	-

- Negative Sample : Nuclease free water



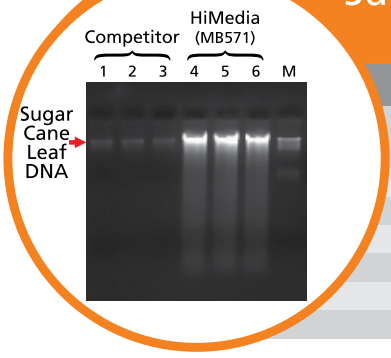
- To check cross contamination between different runs, 2 different protocols were performed.
  1) HBV positive samples in first run.
  2) Nuclease free water in second run.
- qPCR was performed using DNA extracted from Insta NX.
- HBV positive sample was amplified. Nuclease free water sample did not show any amplification.
- No cross contamination was observed between different runs.
- Provision for UV sterilization of Insta NX to avoid cross contamination.

*C_t - Threshold value
#PC - Positive control

Specifications :

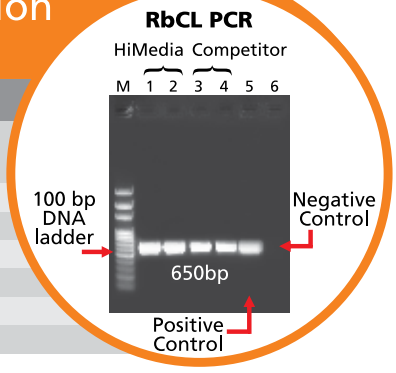
Product Name	Insta NX™
Product Code	LA1056
Sample Capacity	1-12 Samples per run
Sample Volume	200-400µl
Elution Volume	50, 100, 150, 200µl
Processing Time	50-120 minutes (depends on sample type and method)
Heating Block	Room Temp. to 120°Cx1; Room Temp. to 70°Cx1
Electric Control	Internal microprocessor
Light Source	LED white light
Touch Screen	WVGA (16:9) 7" TFT LCD
Power Supply	100-240V, 50/60 Hz
Operating Condition	18-30°C
Weight	60 Kg
Dimension (W x D x H)	44 x 72 x 64 cm
UV Light	InBuilt
Certification	CE & IVD approved

Superplant DNA Purification (MB571)

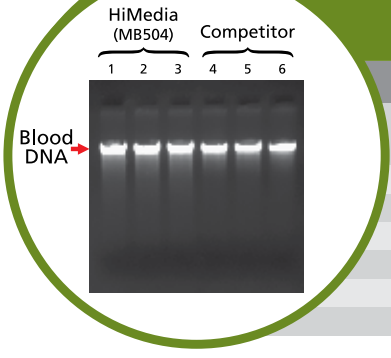


DNA quantitation

Lane	Yield (ng/µl)	Purity (A_{260}/A_{280})	Purity (A_{260}/A_{230})
1	7.4	1.61	1.28
2	4.8	2.68	2.69
3	5.8	1.33	1.73
4	127.7	1.86	2.01
5	130.7	1.83	2.02
6	129.9	1.84	2.06

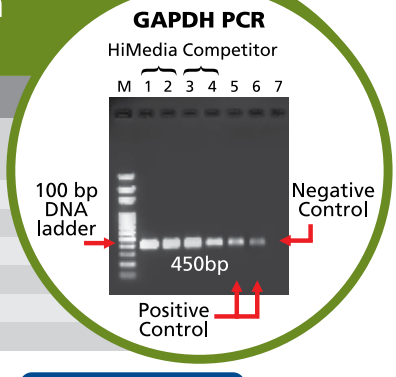


Blood DNA Purification (MB504)



DNA quantitation

Lane	Yield (ng/µl)	Purity (A_{260}/A_{280})	Purity (A_{260}/A_{230})
1	18.6	1.72	0.67
2	19.5	1.75	0.67
3	20.3	1.71	0.69
4	15.4	1.63	1.22
5	15.6	1.64	1.18
6	13.9	1.89	1.21



Extraction

Plasmid DNA Purification (MB508)

DNA quantitation

Lane	Yield (ng/µl)	Purity (A_{260}/A_{280})	Purity (A_{260}/A_{230})
1	122.9	1.90	2.07
2	127.4	1.90	2.11
3	124.8	1.86	2.03
4	115.5	1.91	2.40
5	115.1	1.93	2.48
6	111.5	1.94	2.40