MB583M HiPurA® Clinical Multi- purpose Magnetic Nucleic Acid Purification Kit

Kit Contents

Product Code	Reagents provided	MB583M 480 preps
DS0010	Lysis Solution (C1)	252 ml
ML116	Resuspension Solution (1X PBS)	102 ml
DS0015	Lysis Solution (AL)	90 ml
DS0011	Prewash Solution Concentrate (PW)	120 ml
DS0040	Elution Buffer(ET) [10mM Tris-Cl, pH8.5]	36 ml
DS0013	Proteinase K	11 ml
DS1005A	Magnetic Beads	11 ml
DS0003	RNase A (20mg/ml)	11 ml

Intended Use

Recommended for isolation of genomic DNA from various samples like blood, plasma, serum, saliva, buccal swabs, buffy coat, cells and tissue.

Introduction

HiPurA® Clinical Multi- purpose Magnetic Nucleic Acid Purification Kit provides the fastest and easiest way to purify DNA for reliable use in amplification technologies. HiPurA® Clinical Multi- purpose Magnetic Nucleic Acid Purification Kit can be used for isolation of genomic DNA from a wide variety of samples, but the performance may vary depending on the sample type.

HiPurA® Clinical Multi- purpose Magnetic Nucleic Acid Purification Kit

This kit carries out efficient extraction of genomic DNA from wide range of samples. Sample is first lysed under the highly denaturing conditions provided by Lysis Solution to inactivate DNases and to ensure isolation of intact genomic DNA. The DNA purification procedure comprises of three steps viz. adsorption of DNA to the magnetic beads, removal of residual contaminants and elution of pure genomic DNA. The magnetic beads have a high binding capacity and high quality genomic DNA is obtained from various species. The DNA obtained is compatible with downstream applications such as restriction enzyme digestion, PCR and Southern blotting.

Elution

The yield of DNA depends on the sample type and the number of cells in the sample. A single elution with Elution Solution will provide sufficient DNA to carry out multiple amplification reactions.

ISO 9001-2015 CERTIFIED
WHO GMP CERTIFIED
ISO 13485-2016 CERTIFIED

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Storage

HiPurA® Clinical Multi- purpose Magnetic Nucleic Acid Purification Kit can be stored at room temperature (15-25°C) for up to 1 year without showing any reduction in performance.

Materials needed but not provided

1. 55°C water bath or heating block (For Tissue Preparation)
2. Tabletop Microcentrifuge (with rotor for 2.0 ml tubes) [TabSpin® 012 (LA1090)]
3. Ethanol (96 - 100%)
4. Ethanol (75%)
5. 1X PBS (Product Code: ML116)
6. Insta NX® Mag32 (Product Code: LA1096)
7. Vortex
8. Polypropylene sealing film (Product Code: PR21)
9. Collection Tube, 2.0ml (Micro Centrifuge Tube-C- PW147)
10. Shaking water bath
11. Sterile foam Tipped Swab (Product Code: PW1174)
12. Trypsin
13. Insta NX® Mag96 (Product Code: LA1097)
14. Magnetic stand (Product Code: LA1107, LA1108, LA1109, LA1110)
15. 96 Deep Well Plate for Insta NX® Mag96- For Insta NX® Mag96 Extraction (LA1097B)
16. 96 Deep Well Plate for Insta NX® Mag32- For Insta NX® Mag32 Extraction (LA1096B)
17. 96 Elution Plate for Insta NX® Mag96- For Insta NX® Mag96 Extraction (LA1097C)
18. Magnetic rod's tip for Insta NX® Mag32- For Insta NX® Mag32 (LA1096A)
19. Magnetic tip comb for Insta NX® Mag96- For Insta NX® Mag96 Extraction (LA1097A)
20. Insta NX® Mag16 (Product Code: LA1118)
21. Cartridge Holder (Product Code: LA1118CH)
22. 0.5M EDTA (pH8.0) [Product Code: ML014]
23. Xylene (Product Code: MB180)

General Preparation Instructions

1. Preheat a water bath or heating block to 55°C.
   (For Tissue Preparation)

2. **Thoroughly mix reagents**
   Examine the reagents for precipitation. If any kit reagent forms a precipitate (other than enzymes), warm at 55-65°C until the precipitate dissolves and allow cooling to room temperature (15-25°C) before use.

3. Ensure that clean & dry Nuclease-free tubes and tips are used for the procedure.

4. **Dilute Prewash Solution Concentrate (PW) (DS0011) as follows:**

Number of Preps	Prewash Solution Concentrate (PW)	Ethanol (96-100 %)
480	120 ml	180 ml

RNase A enzyme treatment

RNase A is a type of RNase that is commonly used in research. RNase A (e.g., bovine pancreatic ribonuclease A) is one of the sturdiest enzymes in common laboratory usage. It cleaves 3' end of unpaired C and U residues.

Unit Definition for RNase A

One unit of the enzyme causes an increase in absorbance of 1.0 at 260 nm when yeast RNA is hydrolyzed at 37°C and pH 5.0. Fifty units are approximately equivalent to 1 Kunitz unit. It is completely free of DNases and proteases. The specific activity is 90 U/mg.

The product as supplied is stable at room temperature (15-25°C).

Specimen Handling and Collection

Collect cells, tissues, blood sample, serum, plasma in a sterile container and freeze the sample at -20°C for short term storage or -80°C for long term storage. Collect whole blood in an anticoagulant tube (an EDTA tube is preferred) under sterile conditions (if to be used for future) and store the samples at 2-8°C for short term storage or -20°C for long term storage.
Incubate cells, tissues, blood sample, serum, plasma samples on ice for complete thaw. Ensure that the samples are at room temperature (15-25°C) before beginning the protocol.

Collect the buccal/gargled sample with the help of a swab and store the samples at 2-8°C for short term storage or -20°C for long term storage. Incubate the samples on ice for complete thaw. Ensure that the samples are at room temperature (15-25°C) before beginning the protocol.

After use, contaminated material must be sterilized by autoclaving before discarding.

Type of Specimens

Clinical samples: tissue, blood, cells, serum, plasma, saliva, buccal swabs, buffy coat

Instructions before use

- Vortex Magnetic Beads (DS1005A) before use to ensure they are homogenous. Avoid creating bubbles during pipetting.

Procedure

Tissue/ Cells

Tissue Preparation

I. **Prepare tissue**

Weigh a piece of fresh or frozen tissue and mince quickly either by grinding in motor and pestle or by grinding in liquid nitrogen. If frozen tissue is used, allow it to thaw slightly before slicing but keep on ice in order to protect degradation. Cut the tissue into small pieces as it enables more efficient lysis. Up to 25 mg of tissue (or 10 mg of spleen, due to the high number of cells per given mass) may be used per preparation. Transfer to a capped 2.0 ml collection tube (not provided) and continue to step II of Tissue Preparation.

NOTE: Tissue can be harvested, by aliquoting in 2.0 ml collection tubes (not provided) and flash freezing in liquid nitrogen; these can be stored at -70°C for several months before preparing nucleic acid.

II. **Digest tissue**

Add 180 µl of Lysis Solution (AL) (DS0015) and 20 µl of the Proteinase K solution to the tissue. Mix by vortexing. Incubate the sample at 55°C until the tissue is completely digested with no particles

remaining. Mix by vortexing occasionally or use a shaking water bath. Digestion is usually complete in 2 to 4 hours. Vortex briefly after digestion is completed. **This will be your pre- processed sample.**

Cultured Cell Preparation

I. **Harvest cells**

- **Attached cell cultures:** The cells can be detached using trypsin. Centrifuge upto 5 x 10^6 cells for 5 minutes at 300 x g (≈1500 rpm). Discard the culture medium and continue with step II of Cultured Cell Preparation.
- **Suspension cell cultures:** Centrifuge upto 5 x 10^6 cells for 5 minutes at 300 x g [≈1500 rpm]. Discard the culture medium completely and continue with step II of Cultured Cell Preparation.

II. Resuspend the pellet obtained from step I of Cultured Cell Preparation, in capped 2ml centrifuge tube (not provided) add 200 µl of Resuspension Solution (1X PBS) (ML116) (not provided) and mix thoroughly. If previously frozen, allow the cell pellet to thaw slightly before resuspending. Add 20 µl Proteinase K (DS0013). **This will be your pre- processed sample.**

Insta NX® Mag32

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Pre- processed Sample	180-200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag32 (LA1096A) in the instrument.

NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag32 (LA1096A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) onto the machine.
5. Execute the procedure for **"MB554Tissue"**.
6. After the run is complete, slide the platform of the machine. Remove the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) from the position. Slide the platform back to its position and discard the Magnetic rod's tip for Insta NX® Mag32 (LA1096A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag96

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Take four blocks of 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and one 96 Elution Plate for Insta NX® Mag96 (LA1097C). Add samples and reagents to the 96 well plates according to the below table.

Plate position	Sample/ Reagents	Volume (µl)	NOTE
2	Lysis Solution (C1) (DS0010)	500	
	Pre- processed Sample	180-200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
5	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
6	Ethanol (75%)	600	Not provided
7	Empty 96 Deep well Plate for Insta NX® Mag96	-	
	Magnetic rod's tip	-	
8 96 Elution Plate for Insta NX® Mag96 (LA1097C)	Elution Solution (DS0040)	70	

3. Click on the **flower icon**  on the right corner of the screen.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 (LA1097C) onto the machine as prompted on the screen.

   NOTE: Always replace the Magnetic tip comb for Insta NX® Mag96 (LA1097A) with a new one, or it will cause cross- contamination of the sample.

5. Execute the procedure for "**MB554Tissue"**.

6. After the run is complete, discard the Magnetic tip comb for Insta NX® Mag96 (LA1097A). Remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 from the position. The 96 Elution Plate for Insta NX® Mag96 contains pure eluted DNA. Seal the plate with sealing film (not provided).

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube.

Insta NX® Mag16 (For Plate)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) according to the below table :

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Pre- processed Sample	180-200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) onto the machine.

4. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

5. Execute the procedure for **"MB554Tissue"**.

6. After the run is complete, remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag16 (For Cartridge)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to Cartridge for InstaNX®Mag16 according to the below table :

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Well 1	Lysis Solution (C1) (DS0010)	500	
	Pre- processed Sample	180-200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Well 2	Blank	Blank	
Well 3	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Well 4	Ethanol (75%)	600	Not provided
Well 5	Blank	Blank	
Well 6	Elution Solution (DS0040)	70	

3. Place the filled Cartridge for Insta NX® Mag16 onto the machine.

4. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

5. Execute the procedure for **"MB554Tissue"**.

6. After the run is complete, remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Saliva/ Buccal Swab

Buccal Swab Preparation

NOTE: We recommend using Sterile foam Tipped Swab (Product Code: PW1174) (not provided) for collection of sample from inside of cheek to ensure maximum yield

1. Place the buccal swab into a capped 2.0 ml microcentrifuge tube. Add 400 µl of 1X PBS (ML116) to the tube.
2. Centrifuge the tube at 13,000 rpm for 2 minutes. Discard the pellet and transfer the supernatant to a new collection tube (not provided). **This will be your pre- processed sample.**

Insta NX® Mag32

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Saliva sample/ pre-processed sample	400	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	

Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag32 (LA1096A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag32 (LA1096A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) onto the machine.

5. Execute the procedure for **"MB554Saliva"**.

6. After the run is complete, slide the platform of the machine. Remove the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) from the position. Slide the platform back to its position and discard the Magnetic rod's tip for Insta NX® Mag32 (LA1096A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag96

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Take four blocks of 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and one 96 Elution Plate for Insta NX® Mag96 (LA1097C). Add samples and reagents to the 96 well plates according to the below table.

Plate position	Sample/ Reagents	Volume (µl)	NOTE
2	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Saliva sample/ pre- processed sample	400	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
5	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
6	Ethanol (75%)	600	Not provided
7	Empty 96 Deep well Plate for Insta NX® Mag96	-	
	Magnetic rod's tip	-	

8 96 Elution Plate for Insta NX® Mag96 (LA1097C)	Elution Solution (DS0040)	70	

3. Click on the **flower icon**  on the right corner of the screen.
4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 (LA1097C) onto the machine as prompted on the screen.

   NOTE: Always replace the Magnetic tip comb for Insta NX® Mag96 (LA1097A) with a new one, or it will cause cross- contamination of the sample.
5. Execute the procedure for "**MB554Saliva"**.
6. After the run is complete, discard the Magnetic tip comb for Insta NX® Mag96 (LA1097A). Remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 from the position. The 96 Elution Plate for Insta NX® Mag96 contains pure eluted DNA. Seal the plate with sealing film (not provided).

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube.

Insta NX® Mag16 (For Plate)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Saliva sample/ pre-processed sample	400	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided

Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for for Insta NX® Mag96 (LA1097B) onto the machine.

5. Execute the procedure for **"MB554Saliva"**.

6. After the run is complete, remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag16 (For Cartridge)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to Cartridge for Insta NX® Mag16 according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Well 1	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Saliva sample/ pre-processed sample	400	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Well 2	Blank	Blank	
Well 3	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Well 4	Ethanol (75%)	600	Not provided
Well 5	Blank	Blank	

Well 6	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled Cartridge for Insta NX® Mag16 onto the machine.

5. Execute the procedure for **"MB554Saliva"**.

6. After the run is complete,remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Blood/ Serum/ Plasma/ Buffy coat

Insta NX® Mag32

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag32 (LA1096A) in the instrument.

NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag32 (LA1096A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) onto the machine.
5. Execute the procedure for **"MB554Blood"**.
6. After the run is complete, slide the platform of the machine. Remove the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) from the position. Slide the platform back to its position and discard the Magnetic rod's tip for Insta NX® Mag32 (LA1096A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag96

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Take four blocks of 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and one 96 Elution Plate for Insta NX® Mag96 (LA1097C). Add samples and reagents to the 96 well plates according to the below table.

Plate position	Sample/ Reagents	Volume (µl)	NOTE
2	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
5	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
6	Ethanol (75%)	600	Not provided
7	Empty 96 Deep well Plate for Insta NX® Mag96	-	
	Magnetic rod's tip	-	
8 96 Elution Plate for Insta NX® Mag96 (LA1097C)	Elution Solution (DS0040)	70	

3. Click on the **flower icon**  on the right corner of the screen.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 (LA1097C) onto the machine as prompted on the screen.

   NOTE: Always replace the Magnetic tip comb for Insta NX® Mag96 (LA1097A) with a new one, or it will cause cross- contamination of the sample.

5. Execute the procedure for "**MB554Blood"**.

6. After the run is complete, discard the Magnetic tip comb for Insta NX® Mag96 (LA1097A). Remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 from the position. The 96 Elution Plate for Insta NX® Mag96 contains pure eluted DNA. Seal the plate with sealing film (not provided).

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube.

Insta NX® Mag16 (For Plate)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to the 96 Deep Well Plate for for Insta NX® Mag96 (LA1097B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) onto the machine.
5. Execute the procedure for **"MB554Blood"**.
6. After the run is complete, remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag16 (For Cartridge)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Add reagents to Cartridge for Insta NX® Mag16 according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Well 1	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Well 2	Blank	Blank	
Well 3	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Well 4	Ethanol (75%)	600	Not provided
Well 5	Blank	Blank	
Well 6	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled Cartridge for Insta NX® Mag16 onto the machine.
5. Execute the procedure for **"MB554Blood"**.

6. After the run is complete, remove the Cartridge for Insta NX® Mag16 from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Urine

Sample Pre-treatment procedure

- Centrifuge 5 ml of urine sample in 15 ml centrifuge tube at 13,000 rpm for 5 min. Resuspend the pellet in 500 µl of 1X PBS.
- Add 30µl of 0.5M EDTA (pH 8.0). Mix and centrifuge at 13,000 rpm for 2 min. Discard supernatant.
- Resuspend the pellet with 200 µl of 1X PBS and mix well. **This will be your pre- processed sample.**

Insta NX® Mag32

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Pre- processed sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag32 (LA1096A) in the instrument.

NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag32 (LA1096A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) onto the machine.
5. Execute the procedure for **"MB554Tissue"**.
6. After the run is complete, slide the platform of the machine. Remove the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) from the position. Slide the platform back to its position and discard the Magnetic rod's tip for Insta NX® Mag32 (LA1096A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag96

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Take four blocks of 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and one 96 Elution Plate for Insta NX® Mag96 (LA1097C). Add samples and reagents to the 96 well plates according to the below table.

Plate position	Sample/ Reagents	Volume (µl)	NOTE
2	Lysis Solution (C1) (DS0010)	500	
	Proteianse K	20	
	Pre- processed sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
5	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
6	Ethanol (75%)	600	Not provided
7	Empty 96 Deep well Plate for Insta NX® Mag96	-	
	Magnetic rod's tip	-	
8 96 Elution Plate for Insta NX® Mag96 (LA1097C)	Elution Solution (DS0040)	70	

3. Click on the **flower icon**  on the right corner of the screen.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 (LA1097C) onto the machine as prompted on the screen.

   NOTE: Always replace the Magnetic tip comb for Insta NX® Mag96 (LA1097A) with a new one, or it will cause cross- contamination of the sample.

5. Execute the procedure for "**MB554Tissue"**.

6. After the run is complete, discard the Magnetic tip comb for Insta NX® Mag96 (LA1097A). Remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 from the position.The 96 Elution Plate for Insta NX® Mag96 contains pure eluted DNA. Seal the plate with sealing film (not provided).

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (not provided).

Insta NX® Mag16 (For Plate)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) onto the machine.
5. Execute the procedure for **"MB554Urine"**.
6. After the run is complete, remove the 96 Deep Well Plate for for Insta NX® Mag96 (LA1097B) from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag16 (For Cartridge)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Add reagents to Cartridge for Insta NX® Mag16 according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Well 1	Lysis Solution (C1) (DS0010)	500	
	Proteinase K	20	
	Pre-processed Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Well 2	Blank	Blank	
Well 3	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Well 4	Ethanol (75%)	600	Not provided
Well 5	Blank	Blank	
Well 6	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled Cartridge for Insta NX® Mag16 onto the machine.
5. Execute the procedure for **"MB554Urine"**.
6. After the run is complete, remove the Cartridge for Insta NX® Mag16 from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Processing of paraffin embedded tissue

a) Place a small section (not more than 25 mg) of paraffin-embedded tissue into a 1.5 ml microcentrifuge tube (Not provided).

   NOTE: The total amount of sections depends on tissue size, type and age of your samples. Weigh the total amount of tissue obtained.

b) Add 1 ml of xylene. Rock at room temperature for 5 minutes. Centrifuge at maximum speed (≈ 14000 rpm) for 3 minutes.

c) Remove supernatant by pipetting. Do not remove any of the pellets.

d) Repeat steps b-c, 2-3 times.

e) Add 1 ml of ethanol (96-100%). Rock at room temperature for 5 minutes. Centrifuge at maximum speed (≈ 14000 rpm) for 3 minutes.

f) Remove supernatant by pipetting. Do not remove any of the pellets.

g) Repeat steps e-f, 2-3 times.

h) Vacuum-dry (without heat) or air-dry pellet completely.

I. **Digest tissue**
   Add 180 µl of Lysis Solution (AL) (DS0015) to resuspend the pellet. Mix well and incubate at room temperature (15-25°C) for 30 minutes.

II. Add 20 µl of the Proteinase K solution (DS0013) to the tissue. Mix by vortexing and incubate the sample at 56°C overnight or until the tissue is completely digested with no particle remaining in a Thermal Shaker.

III. Centrifuge at maximum speed 20,000 x g (≈15,000rpm) for 5-10 minutes and collect supernatant in a new collection tube (not provided). **This will be your pre- processed sample.**

Insta NX® Mag32

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Add reagents to the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Pre- processed Sample	180-200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag32 (LA1096A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag32 (LA1096A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) onto the machine.
5. Execute the procedure for **"MB554Tissue"**.
6. After the run is complete, slide the platform of the machine. Remove the 96 Deep Well Plate for Insta NX® Mag32 (LA1096B) from the position. Slide the platform back to its position and discard the Magnetic rod's tip for Insta NX® Mag32 (LA1096A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag96

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Take four blocks of 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and one 96 Elution Plate for Insta NX® Mag96 (LA1097C). Add samples and reagents to the 96 well plates according to the below table.

Plate position	Sample/ Reagents	Volume (µl)	NOTE
2	Lysis Solution (C1) (DS0010)	500	
	Pre- processed Sample	180-200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
5	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
6	Ethanol (75%)	600	Not provided
7	Empty 96 Deep well Plate for Insta NX® Mag96	-	
	Magnetic rod's tip	-	
8 96 Elution Plate for Insta NX® Mag96 (LA1097C)	Elution Solution (DS0040)	70	

3. Click on the **flower icon**  on the right corner of the screen.
4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 (LA1097C) onto the machine as prompted on the screen.

   NOTE: Always replace the Magnetic tip comb for Insta NX® Mag96 (LA1097A) with a new one, or it will cause cross- contamination of the sample.
5. Execute the procedure for "**MB554Tissue"**.
6. After the run is complete, discard the Magnetic tip comb for Insta NX® Mag96 (LA1097A). Remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) and 96 Elution Plate for Insta NX® Mag96 from the position. The 96 Elution Plate for Insta NX® Mag96 contains pure eluted DNA. Seal the plate with sealing film (not provided).

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube.

Insta NX® Mag16 (For Plate)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Add reagents to the 96 Deep Well Plate for for Insta NX® Mag96 (LA1097B) according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Column 1 and 7	Lysis Solution (C1) (DS0010)	500	
	Pre-processed Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Column 2 and 8	Blank	Blank	
Column 3 and 9	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Column 4 and 10	Ethanol (75%)	600	Not provided
Column 5 and 11	Blank	Blank	
Column 6 and 12	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) onto the machine.

5. Execute the procedure for **"MB554Tissue"**.

6. After the run is complete, remove the 96 Deep Well Plate for Insta NX® Mag96 (LA1097B) from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Insta NX® Mag16 (For Cartridge)

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.

2. Add reagents to Cartridge for Insta NX® Mag16 according to the below table.

Well no.	Sample/ Reagents	Volume (µl)	NOTE
Well 1	Lysis Solution (C1) (DS0010)	500	
	Sample	200	
	RNase A	20	
	Magnetic Beads (DS1005A)	20	
Well 2	Blank	Blank	
Well 3	Prewash Solution Concentrate (PW)	600	Prepare Prewash Solution as indicated in General Preparation Instructions
Well 4	Ethanol (75%)	600	Not provided
Well 5	Blank	Blank	
Well 6	Elution Solution (DS0040)	70	

3. Fix a new clean Magnetic rod's tip for Insta NX® Mag16 (LA1118A) in the instrument.

   NOTE: Always replace the Magnetic rod's tip for Insta NX® Mag16 (LA1118A) with a new one, or it will cause cross- contamination of the sample.

4. Place the filled Cartridge for Insta NX® Mag16 onto the machine.

5. Execute the procedure for **"MB554Tissue"**.

6. After the run is complete, remove the Cartridge for Insta NX® Mag16 from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118A). Dispense the eluted DNA to a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided). The eluate contains pure DNA.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads into a new Collection Tube, Polypropylene (2.0 ml) (PW147) (not provided).

Storage of the eluate with purified DNA: The recommended storage temperature for the eluted DNA is -80°C. Avoid repeated freezing and thawing of the sample which may cause denaturing of DNA.

Warning

Not for Medicinal Use. Read the procedure carefully before beginning the protocol. Wear protective gloves/protective clothing/eye protection/face protection. Follow good clinical laboratory practices

while handling clinical samples. Standard precautions should be followed as per established guidelines. Safety guidelines may be referred in safety data sheets of the product.

Limitations

The yield of DNA depends upon the type and the volume of starting material used.

Performance and Evaluation

The yield and efficiency of purification is determined by performing Real- Time PCR.

Quality Control

Each lot of HiPurA® Clinical Multi- purpose Magnetic Nucleic Acid Purification Kit is tested against predetermined specifications to ensure consistent product quality.

Safety Information

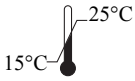
The HiPurA® Clinical Multi- purpose Magnetic Nucleic Acid Purification Kit is for laboratory use only, not for drug, household or other uses. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfecting agents containing bleach. Please refer the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

Disposal

User must ensure safe disposal by autoclaving and/ or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed off in accordance with current laboratory techniques.

Technical Assistance

At HiMedia, we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance mail to mb@himedialabs.com.



Storage temperature

Do not use if package is damaged

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