# MB554PC16200 HiPurA® Pre- filled Cartridges for DNA Extraction

**Kit Contents**

| Product Code | Reagents provided | MB554PC16200 |
|---|---|---|
| | | 48 PR |
| PF16B | Pre-filled Cartridges for DNA Extraction | 48 nos |
| LA1118B | Magnetic Rod Tip for Insta NX® Mag16 | 12 nos |
| DS0013 | Proteinase K | 1 ml |
| DS0003 | RNase A | 1 ml |
| DS1005A | Magnetic Beads | 1.5 ml |
| DS0040 | Elution Buffer (ET) [10 mM Tris-Cl, pH 8.5] | 0.1 ml |

**Intended Use**

Recommended for isolation of Blood, Serum and Plasma DNA from human and animal origin.

**Introduction**

HiPurA® Pre- filled Cartridges for DNA Extraction provides a fast and easy method for purification of total DNA for downstream applications such as PCR, Southern blotting technique etc. HiPurA® Pre- filled Cartridges for DNA Extraction can be used for isolation of genomic DNA from blood, serum, plasma, and cells but the performance may vary depending on the sample type.

**HiPurA® Pre- filled Cartridges for DNA Extraction**

Genomic DNA purification from samples involves cell lysis, which is achieved by incubation of the sample in a solution containing chaotropic ions in the presence of Proteinase K. The Magnetic beads are specially developed for optimal binding of genomic DNA. After the initial binding of DNA, impurities like proteins, polysaccharides, low molecular weight metabolites and salts are removed by short washing steps. High quality DNA is finally eluted in the Elution Buffer provided with the kit.

**Elution**

The yield of DNA depends on the sample type and the number of cells in the sample. A single elution with 50µl of Elution Solution will provide sufficient DNA to carry out multiple amplification reactions.

**Storage**

HiPurA® Pre- filled Cartridges for DNA Extraction 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**

- Insta NX® Mag16 (LA1118)
- 1X PBS (Product Code: ML116)
- Vortex
- Cartridge Holder (LA1118CH)



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

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- 55°C water bath or shaking water bath
- Tabletop Microcentrifuge (with rotor for 2.0 ml tubes)
- 2ml centrifuge tube

**General Preparation Instructions**

1. Preheat a water bath or heating block to 55°C.
   (For cell 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. Vortex magnetic beads before use.

**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 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. Ensure that the blood sample is at room temperature (15-25°C) before beginning the protocol. After use, contaminated material must be sterilized by autoclaving before discarding.

Collect human/animal cells, tissues, blood sample in a sterile container and freeze the sample at -20°C for short term storage or -80°C for long term storage. Ensure that the tissue is at room temperature before beginning the protocol.

**Type of Specimens:** Clinical samples: Whole blood, Plasma, Serum and cells

## Cultured Cell Preparation

**1. 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 2 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 2 of Cultured Cell Preparation.

**2.** Resuspend the pellet obtained from step 1 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. **This will be your pre- processed sample.**

## Set up processing as follows:

**1.** Switch on the UV light 10 mins prior to use.

**2.** Open the door of Insta NX® Mag16 machine.

**3.** Select "MB554-16200" program.

**4.** Remove the seal from the Pre-filled Cartridges for DNA Extraction (PF16B). Place the Pre-filled Cartridges for DNA Extraction (PF16B) into the Cartridge Holder (LA1118CH).

**NOTE: Take care while peeling off the seal. Hold the cartridge firmly by your one hand and then peel off the seal by holding it in your other hand without shaking.**

**5.** Add 200ul of sample, 20ul of Proteinase K (DS0013), 20ul of RNase A (DS0003) and 30ul of Magnetic Beads (DS1005A) in the **1st well of the Pre-filled Cartridges for DNA Extraction (PF16B)**. Place the Cartridge Holder (LA1118CH) along with cartridges on the platform.

**6.** Place the Magnetic rod's tip for Insta NX® Mag16 (LA1118B) by sliding onto the machine.

**NOTE: After placing the rods ensure that the rods are properly fixed on their place.**

**7.** Close the door of Insta NX® Mag16 machine.

**8.** Click on the **RUN** option on the home screen.

**9.** After the run is complete, remove Cartridge Holder (LA1118CH) & cartridge from the position. Discard the Magnetic rod's tip for Insta NX® Mag16 (LA1118B). Dispense the eluted DNA from column 6 to a new Collection Tube, Polypropylene (2.0 ml) (PW1139) (not provided). The eluate contains pure DNA.

**NOTE:** A small number of magnetic beads may be observed in the final eluate at the bottom of the tube. Avoid transferring these magnetic beads to your PCR reaction mixture.

***NOTE: If you process less than 4 samples at a time please order LA1118B- Magnetic Rod Tip for Insta NX® Mag16 (Pack size- LA1118B-4no/ LA1118B-40no).**

**Storage of the eluate with purified DNA:** For short-term storage (24-48 hrs) of the DNA, 2-8°C is recommended. For long-term storage, -20°C or lower temperature (-80°C) is recommended. Avoid repeated freezing and thawing of the sample which may cause denaturing of DNA. The Elution Buffer will help to stabilize the DNA at these temperatures.

**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 HiMedia's HiPurA® Pre- filled Cartridges for DNA Extraction is tested against predetermined specifications to ensure consistent product quality.

**Safety Information**

The HiPurA® Pre- filled Cartridges for DNA Extraction 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.

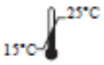
**Disposal**

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.

Please refer disclaimer Overleaf.




Storage temperature

Do not use if package is damaged

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