# HELINI
# MagPure
# Viral RNA
# Purification Kit

[Sample: VTM]

Cat. No: 2501/2 – 16 Prep per plate – 96/768 Prep

Compatible with: HELINI MagPure 32 Automatic Purification system

## Introduction

The HELINI MagPure Viral RNA purification Kit is designed for rapid automated purification of Viral RNA from various samples, such as plasma, serum, saliva, urine, nasal swabs, buccal swabs and urogenital swabs using HELINI MagPure – 32 model Instrument. The Nucleic acid purified using the HELINI MagPure Nucleic acid purification kit contains high quality and free of proteins, nucleases, and other contaminants or inhibitors. They are, therefore, suitable for direct use in many different downstream applications, such as qPCR (quantitative PCR), RT-qPCR (reverse transcription qPCR), and several other enzymatic reactions.

## Intended Use

The reagents and specific plastic consumables are designed for use with the HELINI MagPure 32 automatic purification system.



## Principle and Procedure

The HELINI MagPure Viral RNA purification Kit uses magnetic-particle technology for Nucleic acid purification. The HELINI Biomolecules MagPure technology combines the speed and efficiency of nucleic acids purification with easy handling of magnetic particles. The purification process requires no phenol/chloroform extraction and needs very little hands-on time. The HELINI MagPure Magnetic Beads are highly reactive, super paramagnetic beads. The first step of the protocol lyses the sample, after which the nucleic acids can bind to the surface of the Magnetic Beads. The following three effective wash steps dispose of proteins, cell debris, and any residual contaminants, while the nucleic acids bound to the MagPure Magnetic Beads are transferred through the wash steps. High-quality nucleic acids are eluted into the nuclease-free water, and are ready for subsequent downstream processes.

**Kit components**

| Components per plate | Qty | Storage |
|---|---|---|
| Magnetic beads | 11.5ml | 4ºC |
| 8 well Comb | 96 | RT |
| 96 well Deep well plate | 48 | RT |
| Lysis buffer | 170ml | RT |
| Wash Buffer-3 | 460ml x 2 | RT |
| Elution Buffer | 100ml | RT |
| Instruction manual | | |

**Safety Information**

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. Discard sample and assay waste according to your local safety regulations.

**Technical Assistance**

For technical assistance and more information, please contact;
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**Material required:**

1. Reagent reservoir - 5 Nos. Label them and use dedicated for that particular reagent only.
2. 8 channel variable micro pipette – range - 30 to 300µl
3. 8 channel variable micro pipette – range - 5 to 50µl
4. 8 channel variable micro pipette – range - 100 to 1000µl [optional]
5. Tips for micro pipettes – all above range.
6. Aluminium foil or plate sealing film
7. Scissor
8. 1.5/2.0 micro centrifuge tubes

**Procedure**

1. Take a fresh 96 deep well plate, Label first [1st] and seventh [7th] columns as "L". using permanent marker. Label the 6th and 12th columns as "E". ["L" = Lysis. "E" = Elute]

2. Using 8 well channel micropipette, transfer reagents as follows;

| **Column-1** | **Lysis buffer** | **220µl** |
|---|---|---|
| Column-2 | EMPTY | 0 |
| Column-3 | Wash buffer-3 | 600µl |
| Column-4 | Wash buffer-3 | 600µl |
| Column-5 | EMPTY | 0 |
| Column-6 | Elution buffer | 100µl |
| **Column-7** | **Lysis buffer** | **220µl** |
| Column-8 | EMPTY | |
| Column-9 | Wash buffer-3 | 600µl |
| Column-10 | Wash buffer-3 | 600µl |
| Column-11 | EMPTY | 0 |
| Column-12 | Elution buffer | 100µl |

Care must be taken to avoid cross contamination of reagents between columns, this will affect the purification efficiency.



3. Vortex well or Invert Mix magnetic beads well, add 10 to 15µl of Magnetic beads to each well in column 1 and column 7 of the plate containing lysis buffer. **Note: Cut the micro tip end little length to widen the opening will ensure proper beads dispensing.**

4. Pipette mix 200µl of test sample in to first and seventh column. It is important to mix the sample with lysis/beads mix which improves the purification efficiency.

5. Place the plate in to deck carefully. Care must be taken while placing the plate. Make sure that plates are properly placed and confirm by pressing the top of the plate.

6. Insert the 8 well comb/sleeves and confirm that it is inserted till end of the groove by pressing strong.

   Note: **DO NOT CLOSE THE FRONT DOOR**

7. Select HB.4S program by pressing enter button in the home screen**.**

8. Press **SAVE / Download** and then **Start** button. After immediately pressing the start button, make sure that comb/sleeves going inside the plate and start mixing. After confirming the proper mixing, close the front door.

9. **If any hitting or unusual noise, immediately press the PAUSE and then STOP button. Correct the plates and comb and restart the program.**

**Warning: If not stopped immediately, machine motors will get damaged and the entire machine to be serviced.**

10. Successful completion of the program/purification, machine will beep thrice and the play button turns green.

11. Open the door, carefully remove the comb/sleeves and then remove the plates.

12. Transfer 80µl of elute (nucleic acid) from the 6th and 12th column in to sterile/fresh 1.5ml centrifuge tube. Use immediately or store at -20C



Program Name: HB.4S

| Step | Station | Waiting time | Mixing time | Mixing speed | Heating time | Temp °C | Magnet Time | Magnet Speed | Volume |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **1** | 0 | 5min | 3 | 5min | 65 | 10sec | 2 | 500 |
| 2 | **3** | 0 | 2min | 3 | 0 | 0 | 10sec | 2 | 600 |
| 3 | **4** | 0 | 1min | 3 | 0 | 0 | 10sec | 2 | 600 |
| 4 | **6** | 0 | 3min | 1 | 3min | 60 | 10sec | 2 | 100 |
| 5 | **1** | 0 | 1min | 3 | 0 | 0 | 0 | 2 | 500 |

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