



Viral Prep Adem-kit

AutoMag Solution

Version 1.0

REF 06231

Instruction manual for automation protocol

Prefilled reagents for the AutoMag Instrument

The kit is used for optimal viral RNA/DNA extraction from body fluids such as blood, serum or plasma, as well as from cells culture supernatants or stools.

Kit for 48 reactions

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Viral Prep Adem-Kit

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Introduction

1. Description

The Viral Prep Adem-Kit is specially designed for optimal viral RNA/DNA extraction from body fluids such as **blood**, **serum** or **plasma**, as well as from **cells culture supernatants** or **stools**. The Viral Prep Adem-Kit technology is based on the adsorption of RNA/DNA to paramagnetic particles under appropriate conditions. The Viral Prep Adem-Kit was developed to improve RNA/DNA extraction from all virus species (including enveloped or naked virus) for molecular biology applications.

2. Product Component and storage conditions

Kit Content: Each AutoMag Viral Prep Adem-Kit contains sufficient reagents to perform 48 extractions. The content of the kit are described in Table.

Item	Description	Storage condition	Included with Viral Prep Adem-Kit for AutoMag Solution (#06231)
LB Buffer	One bottle, 20ml	+15-25°C	●
Carrier	One tube, 0,1ml, (concentration 1mg/ml)	+15-25°C	●
RNA/DNA extraction plate	4 prefilled plates per kit	+15-25°C	●
AutoMag Tip Combs	4 X12-tip comb for 96 Deepwell plate per kit	+15-25°C	●

Storage conditions: The kits are shipped at room temperature.

NOTE 1! Properly stored Kits are guaranteed until the expiry date. Note that shipping is realized at room temperature and will not affect stability. All components of the kit have been prepared under nucleases free conditions and have been thoroughly tested to ensure optimal performance.

NOTE 2! Storage conditions

All reagents in the kit can be stored in the range of temperatures from +15°C to +25°C. The carrier also can support this storage conditions. This will not affect the stability of this reagent.

WARNING ! CHEMICAL HAZARD. RNA/DNA Extraction Plate may contain the following: guanidine thiocyanate, isopropanol, and ethanol. Refer to MSDS, and follow the handling instructions; and disposal.



WARNING ! CHEMICAL HAZARD. ARN/DNA Extraction Plate contains **LB Buffer (row C, D and E)** which in contact with acids or bleach liberates toxic gazes. Harmful if inhaled, absorbed through the skin, and swallowed. Cause eye, skin, and respiratory tract irritation. **DO NOT ADD** acids or bleach to any liquid wastes containing this product. Avoid breathing vapour. Do not taste or swallow. Use with adequate ventilation. Avoid contact with eyes and skin. Read the MSDS, and follow and handling instructions. Wear appropriate protect eyewear, clothing and gloves.

3. Required reagents and materials

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. To avoid contamination of your sample, wear face mask.

Materials required but not provided:

- 20°C heat block, thermomixer or water bath
- Microtubes
- AutoMag Instrument (Cat.# 21101) (includes the Viral Prep Adem-Kit script)

Accessory products:

The following products are available for purchase separately from Ademtech

CAT NO.	PRODUCT	PACKAGE SIZE
21101	AutoMag Instrument	Each
21102	Microtiter Deepwell 96 plate	1 pack of 50 pcs
21103	12-tip comb for 96 Deepwell plate	1 pack of 50 pcs

Viral Prep Adem-Kit Protocol

The standard protocol is appropriate for all kind of virus species present in **blood**, **serum** or **plasma** samples, as well as from **cells culture supernatants** or **stools**. The protocol is also suitable for viral RNA/DNA extraction from up to 250µl of sample.



WARNING ! CHEMICAL HAZARD. LB Buffer and Viral Washing Buffer I in contact with acids or bleach liberate toxic gases. Harmful if inhaled, absorbed through the skin, and swallowed. Cause eye, skin, and respiratory tract irritation. DO NOT ADD acids or bleach to any liquid wastes containing this product. Avoid breathing vapour. Do not taste or swallow. Use with adequate ventilation. Avoid contact with eyes and skin. Read the MSDS, and follow and handling instructions. Wear appropriate protect eyewear, clothing and gloves.

1. Perform Viral lysis

1. Place the sample (up to 250µl) in a 1,5ml or 2ml microtube.

NOTE to perform extractions from cell culture!

You have to centrifuge the sample 3 minutes at 2.000rpm in order to clarify the supernatant.

NOTE to perform extractions from stools!

One ml of stool samples (up to 200mg), fresh or freezed, is diluted with 5ml of NaCl 0.89% (physiological water). The sample is centrifuged 20 min at 4.000g and 250µl of supernatant are used for nucleic acids extraction.

2. Add 400µl of LB Buffer in the microtube containing the sample.
3. Add 2µl of carrier.

NOTE! The carrier will be co-extracted with viral RNA/DNA. So, if the carrier interferes with your downstream applications, do not use it.

4. Close the tube and mix well with a vortex. Place the tube in a thermomixer and incubate at room temperature for 10 minutes at 1000rpm.

2. Set up and run automated RNA/DNA extraction

Required materials for extraction:

- AutoMag Instrument (#21101).

AutoMag Instrument is a low-to-medium-throughput purification system with a magnetic particle processor for RNA/DNA purification kits. With the AutoMag Instrument customers can process up to 12 samples per run with a working volume up to 1 ml. In addition, it is possible to run two purification methods sequentially without interruption, raising the throughput up to 24 samples.
- Viral Prep Adem-kit Protocol script “**Viral Prep Prefilled v1.0**”.
- From the appropriate kit (Viral Prep Adem-Kit AutoMag Solution #06231).
 - The “DNA/RNA Extraction Plate”.

The plates are designed to fit onto the AutoMag rack in only one orientation. Plate are sealed and pre-filled with the Viral Prep Adem-Kit reagents required for the protocol. Row B and H are empty.
 - AutoMag Tips combs.



AutoMag Instrument (Cat.# 21101)

Set up the AutoMag instrument for RNA/DNA extraction

1. Prepare the lysate according to the instructions on page 7.
2. Inspect the RNA/DNA Extraction plate.

NOTE!

One sealed and prefilled plate is required per 12 samples.

Before take-off the adhesive film from the top of the pre-filled reagent plate, briefly centrifuge in order to move all the reagents to the bottom.

Gently remove the film of the pre-filled reagents plate.

Table 1 Summary of RNA/DNA Extraction Plate content

Row	Row name	Content
A	Elution	Elution Buffer
B	Tip	empty
C	Capture	Isopropanol / Prep-Adembeads
D	Wash 1	Viral Washing Buffer I
E	Wash 2	Viral Washing Buffer I
F	Wash 3	Washing Buffer II
G	Wash 4	70% ethanol
H	Empty	empty

NOTE!

Row B is reserved for the tip comb

Row H is left empty

Transfer **the total viruses lysate** in each well of the **Row C**.

- 3. Place a 12-tip comb into row B of the prefilled reagents plate.**



12-tip comb for 96 Deewell plate (Cat.# 21103)

NOTE!

Only one tip comb can be placed onto a RNA/DNA extraction plate.

- 4. Load the plate in the AutoMag Instrument and start the “Viral Prep v1.0”.**

Switch ON the AutoMag Instrument and make sure that you are using the 12-pin magnet head and heating block.

Select the protocol by using the arrows keys and press **START**

Load the pre-filled reagents plate as indicated on the AutoMag Instrument display and press OK.

NOTE! Place the A1 well of the sealed plate ensuring that it is in the upper right corner. The first A1 row is consequently always in the inner circle.

- 5. After the run is completed, remove the RNA/DNA Extraction Plate and store the purified RNA/DNA.**

Viral Prep Adem-Kit

When the protocol is completed, remove the RNA/DNA Extraction Plate according to the instructions on the AutoMag Instrument display and turn off the instrument.

NOTE! Store or analyze the purified RNA/DNA accordingly. If RNA/DNA is not analyzed immediately, store it at 4°C for up to 24 hours. For longer period, consult laboratory guidelines. Freezing samples at -20°C has been shown to preserve RNA/DNA for longer periods of time.

Troubleshooting

Observations	Comments and suggestions	
Error message in instrument display	Refer to the user manual supplied with your AutoMag Instrument.	
The tip comb holder lifting mechanism is out of position	Switch the instrument OFF and ON, and try again. If the error appears during initialization or is otherwise repeated, contact service.	
The turntable rotating mechanism is out of position	Switch the instrument OFF and ON, and try again. If the error appears during initialization or is otherwise repeated, contact service.	
The magnet head holder lifting mechanism is out of position	Switch the instrument OFF and ON, and try again. If the error appears during initialization or is otherwise repeated, contact service.	
The plastic tip comb is not attached to the holder	Check if the tips are presents. If it looks all right, turn ON and OFF, and run the check protocol.	
Nor or low yield of DNA	Biological sample contains no or low amount of DNA.	Review protocol steps and reagents additions.

Warranty

This product is only for use in research. The purchaser is responsible to validate the performance of this product for any particular use, and to use the product in compliance with any applicable regulations. The products are warranted to the original purchaser only to conform to the quality and contents stated on the vial and outer labels for duration of the stated shelf life. Ademtech's obligation and the purchaser's exclusive remedy under this warranty is limited either to replacement, at Ademtech's expense, of any products which shall be defective in manufacture, and which shall be returned to Ademtech, transportation prepaid, or at Ademtech's option, refund of the purchase price. Claims for merchandise damaged in transit must be submitted to the carrier.

Symbols

 **Reference Number**

 **Symbol for batch code/lot number.**

The symbol is accompanied by the manufacturer's batch code

 **Manufacturer**

This symbol is accompanied by the name and address of the manufacturer.

 **Expiration Date**

This symbol is accompanied by a date to indicate that the device should not be used after the end of the year, month or day shown.

 **Sufficient For**

The number of items for which the contents of the pack is sufficient appears adjacent to the symbol.

 **Temperature Limitation / Temperature Range**

Symbol for temperature limitation or temperature range. Both upper and lower limits are indicated adjacent to horizontal lines.

Ordering Information

- **Ademtech Kits**

CAT NO.	PRODUCT	PACKAGE SIZE
06230	Viral Prep Adem-Kit	1 x 96
06231	Viral Prep Adem-Kit AutoMag Solution (prefilled reagents plate)	48 (4X12)

- **Instrument and consumables**

CAT NO.	PRODUCT	PACKAGE SIZE
21101	AutoMag Instrument	Each
21102	Microtiter Deepwell 96 plate	50 pcs
21103	12-tip comb for 96 Deepwell plate	50 pcs
21104	Elution strip	40 pcs