ACExtract Viral RNA/DNA Extraction Kit (magnetic beads) 100 Tests

Cat# CE1029–100 tests

15 ~ 25°C, It is recommended to store the magnetic beads at 2 ~ 8°C. Please be noted the beads shall not be stored below 0°C.

INTENDED USE

This product is used for the steps of nucleic acid extraction, enrichment and purification. This kit is applicable for extracting highly pure viral nucleic acid (DNA/RNA) from samples such as human nasopharyngeal swabs, sputum, broncho lavage fluid and alveolar lavage fluid. The obtained nucleic acid can be used in the clinical in vitro testing.

PRINCIPLE

This product is a nucleic acid extraction and purification reagent based on magnetic bead method. The unique embedded silica-coated superparamagnetic magnetic beads are used to adsorb nucleic acids through hydrogen bonding and static electricity, and then wash to remove the remaining proteins and salts. When using a low-salt buffer, the magnetic beads release nucleic acids, which are quickly isolated and purified.

CONTENTS

No	Component	**Ingredient**	**CE1029–100 tests**
AA	Magnetic Beads	2 ml	Magnetic particle
AB	Lysis Solution	30 ml	Trimethylolaminomethane, Guanidine thiocyanate, Sodium hloride
AC	Proteinase K	2 x 1 ml	Proteinase K
AD	Washing Buffer 1	38 ml	Sodium dodecyl sulfonate, Ethylenediamine tetraacetic acid
AE	Washing Buffer 2	20 ml	Trimethylolaminomethane, Ethylenediaminetetraacetic acid, Guanidine thiocyanate
AF	Elution Buffer	6 ml	Trimethylolaminomethane

NOTE:

1. Additional Materials Required: RNase-free tips, 1.5 ml of RNase-free tubes ,Vortex vibration, pipette, magnetic stand, absolute ethanol.
2. Do not mix the components from different batches for detection.
3. Before using for the first time, add the appropriate volume of ethanol (96%–100%) as indicated on the bottle to the Lysis Solution, Washing Buffer 1 and Washing Buffer 2, and mark it. Shaking thoroughly to obtain a working solution.
4. The magnetic beads shall be fully dispersed by vortex vibration before use.
5. Please wear lab coats, disposable latex gloves, disposable masks and apply Nuclease-free consumables, etc. in the use of this kit, to avoid RNase contamination to the greatest extent.

STORAGE

The validity period of this product is 6 months if stored at room temperature (15 ~ 25°C);

The validity period can be extended if stored at 2 ~ 8°C;

The product shall be transported at room temperature(15 ~ 25°C);

It is recommended to store the magnetic beads at 2 ~ 8°C. Please be noted the beads shall not be stored below 0°C.

SAMPLING & HANDLING

1. The collection, transportation and storage of samples comply with relevant operating specifications.
2. The collected specimen should be used for detection within the same day.
   Otherwise, please store the specimen as follows:
   Store at 2 - 8°C for no more than 24 hours;
   Store at < -20°C for no more than 10 days;
   Store at < -70°C for long-term, avoiding repeated freeze-thaw cycles.

INACTIVATION TREATMENT

Further inactivation treatment should be taken as required before extraction. For heat inactivation of SARS-CoV-2, it is recommended to incubate at 56 °C

PROTOCOL

1. Preparation

a. Before using for the first time, add the appropriate volume of ethanol (96%–100%) as indicated on the bottle to the Lysis Solution, Washing Buffer 1 and Washing Buffer 2 , and mark it. Shaking thoroughly to obtain a working solution.

b. Preparation of magnetic beads: before using, the magnetic bead solution must be shaken vigorously for 1 min to fully disperse the magnetic beads.

c. The Lysis Solution may precipitate when stored at low temperature. In case of precipitation in the lysis solution, it can be used after redissolution at room temperature or 37 °C and mix thoroughly before use.

2. Nucleic acid extraction and purification

a. Add 200 µl sample (the sample less than 200 µl can be supplemented with normal line) to a new 1.5 ml nuclease-free EP tube (additional consumable), then add 20 µl Proteinase K, and mix it evenly by slight vortex or putting it upside down. After that, add 20 µl Magnetic Beads and 700 µl Lysis Solution (**Make sure absolute ethanol has been added**), mix them for 15 sec with vortex vibration, and conduct lysis at room temperature for 5 min, during which the tube shall be put upside down twice for even mixing.

b. Conduct instantaneous centrifugation, place the EP tube on the magnetic stand, leave it resting for 1 min, and then remove the supernatant with a pipette.

c. Take the above sample from magnetic stand, add 700 µl Washing Buffer 1 (**Make sure absolute ethanol has been added**), and mix them evenly with vortex for 15 sec. Then conduct instantaneous centrifugation, put

the EP tube on the magnetic stand, leave it resting for 1 min, and thoroughly remove the supernatant.

d. Take the above sample from the magnetic stand, add 700 µl Washing Buffer 2 (**Make sure absolute ethanol has been added**), and mix them evenly with vortex for 15 sec. Then conduct instantaneous centrifugation, put the EP tube on the magnetic stand, leave it resting for 1 min, and thoroughly remove the supernatant.

e. After instantaneous centrifugation, put it on the magnetic stand again and remove the residual supernatant. Remove the lid, and leave it open at room temperature for 3 min to 5 min until no reflection of light is found on the surface of the beads.

Note:

In order to ensure the purity of nucleic acid, the washing buffer 2 shall be removed thoroughly; at the same time, excessive drying (cracking) of magnetic beads will affect the final output.

f. Add 50 µl Elution Buffer, mix it gently for 15 sec, and leave it resting at room temperature for 3 min, during which it shall be mixed evenly twice by vibration.

g. After instantaneous centrifugation to the bottom of EP tube, put the sample on the magnetic stand again, and leave it resting for 1 min. Draw the supernatant to a new nuclease-free centrifuge tube (additional consumable). It can be used for follow-up detection, or stored for a short term at -30~ -15 °C, or stored for a long term below -70 °C.

h.

PRECAUTIONS

1. Inspectors should be professionally trained. Please read the instructions of the kit carefully before the experiment, and strictly follow the operation steps.
2. Pay attention to protection when handling reagents and samples, and disinfect thoroughly after handling.
3. All samples must be treated as potential sources of infection.
4. Avoid repeated freezing and thawing of samples, otherwise the extracted viral nucleic acids will be degraded and the amount of extraction will decrease.
5. This reagent is for in vitro diagnostic use only.

DATE OF MANUFACTURE AND EXPIRATION

See packaging

PRODUCT USE LIMITATION

These products are intended for research use only.

RELATED PRODUCTS

COVID-19 Triplex RT-qPCR Detection Kit 100 Tests	COV3001	100 tests
ACExtract Viral RNA/DNA Extraction Kit (column) 100 tests	CE1026	100 tests
Virus Sample Stabilizer 50 Tests	CE1028	50 tests