Viral RNA Extraction Kit

(Spin Column)

Q-line® Molecular

- Rapid extraction of High-quality viral RNA from saliva & respiratory specimens (nasal liquid & swab samples).
- High quality viral RNA extraction free from protein & other organic compound impurities.
- Based on Spin Column Extraction Method using benchtop centrifuge.
- Classical silica membrane adsorption technology with buffer system.
- With carrier RNA molecule for viral RNA yield enhancement and increased sensitivity to viral genome targets.
- Elution buffer with anti-microbial and RNase contamination prevention components.
- Only 200 µl sample volume required & 30-100 µl customizable elution volume.
- About 30 minutes RNA extraction processing time.
- Simple & Conventional procedure with Ready to use kit format.

COMPONENTS

- Lysis Buffer
- Wash Buffer I
- Wash Buffer II
- Elution Buffer
- Spin Column
- Collection Tube (2.0 ml)
- Carrier RNA

REQUIREMENTS FROM LAB

- Benchtop Centrifuge
- Ethanol
- Microcentrifuge Tubes(1.5ml)

Ordering Information

Product Code	Product description	Pack Size
COVEX050PS	Virus RNA Extraction kit (Spin Column Based)	1 x 50 Tests

Marketed By

SMS
SIVA MEDICAL SERVICES

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Manufactured By

POCT SERVICES
Complete Medical Solution

R & D

Sperogenx Biosciences Pvt. Ltd.

Co-developed with

RGCB
DBT-Rajiv Gandhi Centre for Biotechnology, Govt. of India.

Q-line® *Molecular* Virus DNA/RNA Extraction Kit (Spin Column)

Reference / Pack Sizes
COVEX050PS 1 x 50 Test

INTENDED USE

Q-Line® *Molecular* Virus DNA/RNA Extraction Kit is suitable for DNA/RNA extraction from blood, tissue, organs, environmental sample, saliva, nasal liquid and swab sample.

PRINCIPLE

Extraction Kit uses classic silica membrane adsorption technology and unique buffer system. It can be used to extract DNA/RNA from blood, tissue, organs, environmental sample, saliva and nasal sample and removes maximum protein impurities and other organic compound impurities. The extracted virus DNA/RNA can be directly used for downstream applications such as PCR, RT-PCR, qPCR and qRT-PCR experiment.

KIT CONTENTS

Component	Amount (For 50 preps)
Buffer GLX	30 mL
Buffer PD	15 mL
Buffer PW	15 mL
RNase-free ddH2O	10 mL
Spin column RC2	50 pcs
2.0 ml Collection tube	50 pcs
Proteinase K (20 mg/mL)	1 mL

MATERIALS REQUIRED BUT NOT PROVIDED

- Centrifuge
- General laboratory consumables

WARNINGS AND PRECAUTIONS

1. This product is only used for in vitro extraction. Please read this manual carefully before use.
2. Laboratory personnel must be professionally trained and the experimental process should be strictly divided into sections. All consumables should be used only once after sterilization.
3. All samples should be regarded as potentially infectious materials. Laboratory workers should wear appropriate personal protective equipment (PPE) which includes disposable gloves, laboratory coat or grown. Gloves should be changed regularly to avoid cross-contamination between samples.
4. Clinical laboratories involving manipulation of potentially infected specimens should be performed in a certified Class II Biological Safety Cabinet (BSC) in a BSL-2 facility. Diagnostic tests should follow standard laboratory practices, including Standard Precautions, when handling potential patient specimens.
5. Avoid freezing and thawing the samples repeatedly, otherwise the extracted genome fragments will be reduced and the concentration will decrease.
6. Unless otherwise specified, all the centrifugation steps should be performed at room temperature.
7. Because Buffer PD contains irritants, please wear lab coat and gloves to protect yourself when operation. If splashed on skin or eyes, continuous rinse with clean water or saline immediately, go to the hospital for treatment if necessary.
8. The reagent contains alcohol, please tighten the bottle cap after use.

STORAGE & STABILITY

1. Shelf-life of reagent kit is 12 months. Manufacture date is indicated on the box.
2. Q-Line® *Molecular* Virus DNA/RNA extraction kits can be stored dry at RT (15-25 °C) for 12 months. However, Proteinase K need to be stored in -20°C for long time preservation.

SAMPLE REQUIREMENT

1. Sample Type: Blood, tissue, organs, throat swabs, saliva, virus preservation buffer and others
2. Sample Collection: Collect in accordance with conventional sample collection methods
3. Sample Storage & Transportation: Sample to be tested can be processed immediately or stored at -20 ± 5°C for 3 months, -70°C for long term. Avoid repeated thawing and freezing.
4. Sample transportation: Sample should be transported with refrigerant packs in sealed Styrofoam box or ice pack.

PREPARATION

1. Before first use, add the specified volume of reagent to Buffer PD, Buffer PW.
2. Prepare tip and collection tubes which are free of nucleic acid and nuclease.
3. Observe whether the solution precipitated before use, if there is precipitation in solution, dissolve it in 37°C bath and cool to RT before use.

EXTRACTION METHOD (TEST PROTOCOL)

Ensure that Buffer PW and Buffer PD have been prepared with appropriate volume of reagent asindicated in the label on bottle.

1. Sample preparation

Blood Sample
Prepare adequate blood sample (plasma or serum) for later use.

Sample of animal tissue homogenate
Take 0.1 g sample (about the soybean size) transfer it to a 2 mL collection tube, add 1ml sterile saline. After being ground and mixed with grinder, centrifuge at 7,000 rpm for 5 mins on a palm centrifuge. Take the supernatant for later use.

Environmental samples
Dust: Use a cotton swab to wipe the dust on the surface of the instrument, table, etc., put it into 500 µL of sterile saline, centrifuge at 7000 rpm for 5 minutes on a palm centrifuge. Take the supernatant for later use.

Sewage: Take a proper amount of sewage sample for later use.

Saliva, nasal liquid
Take a proper amount of nasal liquid or saliva sample for later use.

Swab sample
Take the oral, nasal or pharyngeal swab, put it directly into 500 µL of sterile saline and take the supernatant for later use. Or put the swab in transport medium for preservation.

2. Lysis
1) Take 200 µL of the processed sample, add 500 µL of Buffer GLX and 20 µl of Proteinase K, mix by vortex for 1 min, and put it in 65°C bath for 10 minutes.

3. Adsorption
2) Transfer the supernatant from step 2 into spin column RC2 which was put inside 2 mL collection tube. Centrifuge at 12,000 rpm for 1 minute and discard the flow-through. Put the spin column back into the 2 mL collection tube.

Notice: large volume solution could be added to RC2 in several times, small volume rare samples in the collection tube could be added to RC2 and centrifuge again to improve recovery efficiency.

4. Wash
3) Add 500 µL of Buffer PD to the spin column (ensure isopropanol was added before use), centrifuge at 12,000 rpm for 1 min at room temperature and discard the flow through and put the spin column RC2 back to collection tube.

4) Add 700 µL of Buffer PW to the spin column (ensure absolute ethanol was added before use), centrifuge at 12,000 rpm for 1 min at room temperature and discard the flow through and put the spin column RC2 back to collection tube.

5) Repeat step 4)
6) Centrifuge at 12,000 rpm for 2 mins and discard the flow through. Put the RC2 at room temperature for 5 -10 mins.

Notice: After wash, open the lid of spin column and put at room temperature for several minutes to remove ethanol.

5. Elution
7) Place the spin column into a new 1.5 mL collection tube, add 50-100 µL of RNase-free ddH_2O and place the column at room temperature for 2 mins. Centrifuge at 12,000 rpm for 2 minutes at room temperature to elute and collect the RNA.
RNase-free ddH_2O could be preheated in 65-70°C water bath to increase elution efficiency.

SYMBOLS:-

IVD In vitro diagnostic medical device use	Single Use
Manufacturer	Number of tests in the pack
Date of Manufacturing	Do not use if pouch or kit damaged
Expiry Date	This side Up
LOT Lot Number	Read package insert before use
Store at 15 - 25°C	

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