SwiftX™ Virus

Handbook

Content

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Buffer RL (5mL)
Beads A (750µL)
Proteinase K (150µL)

The reagents are sufficient for 50 extractions.

Storage

SwiftX™ Virus must be stored **at 2-8°C** and can be used until the expiry date indicated on the labels.

Product Use and Principles

SwiftX™ Virus is designed for rapid extraction of viral DNA and RNA from blood serum and blood plasma. Do not use for diagnostic procedures.

Proteinase K is a protease that inactivates DNases and RNases to protect extracted nucleic acids.

In conjunction with the application of heat, **Buffer RL** enables the lysis of viral particles in the sample. Furthermore, the formulation of Buffer RL enables the stabilization of the extracted RNA. Buffer RL is compatible with downstream applications such as PCR and isothermal amplification technologies.

The magnetic particles **Beads A** are utilized to remove cell debris, protein remnants and other particulate matter from the lysis mixture after heat lysis.

The procedure can be performed manually as well as in an automated fashion. Automation of the nucleic acid extraction protocol is possible with a variety of robotic pipetting and handling systems due to its minimal number of working steps. Any adaptation has to be performed and validated by the user.

Safety information

SwiftX™ Virus comprises of three different components. Buffer RL and Beads A are free of hazardous substances. However, be careful when handling Proteinase K. According to the CLP regulation, this enzyme formulation shall be considered a hazardous substance. The safety data sheets (SDS) for SwiftX™ Virus are available upon request.

The following hazard and precaution statements apply for Proteinase K:

Danger.

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
P264	Wash respective body parts after accidental contact
P280	Wear protective gloves, eye and face protection

Take care when working with biological samples and always treat them as potentially infectious. Users are advised to always wear appropriate personal protective equipment.

Nucleic acid extracts can be disposed off with regular laboratory waste. Please take your national regulations for waste sorting and treatment into consideration.

Equipment to be provided by the user

- Appropriate personal protective equipment
- Pipets and disposable pipet tips (aerosol barriers recommended)
- 1.5mL microcentrifuge tubes (safe-lock-caps or screw-caps recommended)
- Magnetic stand, e.g. *Xpedite Diagnostics, cat.no. MAG-12*
- Vortexer, e.g. *Xpedite Diagnostics, cat.no. VOR-01*
- Dry heat block, e.g. *Xpedite Diagnostics, cat.no. ACC-12,* or another heat source such as a water bath or a thermo shaker

Quality control

Each batch of SwiftX™ Virus is tested against defined specifications to ensure consistent product quality. A Certificate of Analysis can be provided upon request.

Protocol for extraction of viral DNA and RNA

To do before starting

- ***Read the complete protocol.***
- Heat a water bath, heating block, or thermal shaker to 95°C.
- Shake or vortex Beads A for 30 seconds to ensure a homogeneous suspension.

Perform the following DNA extraction procedure in a 1.5mL microtube.

1. **Shake or vortex Beads A for 30 seconds to ensure homogeneous suspension. Pipet 15µL of Beads A into a microtube or microtiter well.**

2. **Add 3µl Proteinase K.**

3. **Add 100µL Buffer RL.**

4. **Add 20µL of your serum or plasma sample. Mix well by vortexing or pipetting up and down.**

5. **Tightly close the microtube (screw-caps or lock-caps recommended).**

6. **Incubate lysis mixture at 95°C for 5 to 10 minutes.**

7. **Remove the sample from the heating device and mix well for 5 seconds.**

8. **Remove condensate from the lid by short-spinning or tapping the tube or plate on the work bench.**

9. **Place the sample in a magnetic stand at room temperature for 1 minute to let the magnetic particles separate.**

10. **Open the lid while the sample remains in the magnetic stand and transfer the supernatant into a new microtube or microtiter plate for storage or use in downstream applications.**

Extracted DNA can be stored for 1 month at -20°C or for 6 months at -80°C.

Extracted RNA can be stored for 2 days at -20°C or for 1 month at -80°C.

Contacts and disclaimer

This product is owned by:

Xpedite Diagnostics GmbH
Lilienthalstr. 2a
85399 Hallbergmoos
Germany

www.xpedite-dx.com
info@xpedite-dx.com

This product may be used solely in accordance with the provided protocol. Every step deviating from this protocol must be validated by the user.

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