SwiftX™ Media

Instructions for Use

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Storage

SwiftX™ Media must be stored **at 2-8°C** until the expiry date indicated on the label.

Product Use

For Research Use Only.

SwiftX™ Media is designed for rapid extraction of RNA and DNA from biological samples in transport media. 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 the very limited number of working steps. Any adaptation must be performed and validated by the user.

Safety information

SwiftX™ Media comprises of a buffer (Buffer ME) and an enzyme blend in powder form (Component P). The buffer is free of hazardous substances. However, be careful when handling Component P. According to the CLP regulation, these powder formulations shall be considered hazardous substances. The material safety data sheet (MSDS) for SwiftX™ Media is available upon request.

The following hazard and precaution statements apply:

For Component P (in dry powder form only):

Danger.

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

P264	Wash respective body parts after accidental contact
P280	Wear protective gloves, eye, and face protection
P261	Avoid breathing dust
P284	Wear respiratory 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.

Quality control

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

Principles

SwiftX™ Media is designed for fast extraction of RNA and DNA of viruses, bacteria and eukaryotic cells originating from samples in transport media, such as Saline, Universal Transport Medium, or Liquid Amies medium.

SwiftX™ Media features a multifunctional formulation. It stabilizes viral particles, bacteria and other cells before lysis and enables an efficient lysis of these during the extraction procedure. Furthermore, it stabilizes extracted RNA and DNA by inactivation of sample-inherent degrading mechanisms. It is non-inhibiting to a wide range of amplification chemistries.

Viral particles and bacteria entrapped in eukaryotic cells are efficiently released by application of heat to the sample. Due to the special formulation of SwiftX™ Media, this will not negatively impact the quality of the extracted RNA and DNA.

Equipment provided by the user

- Appropriate personal protective equipment
- Pipets and disposable pipet tips (aerosol barriers recommended)
- 1.5ml microcentrifuge tubes (locked-caps or screw-caps recommended) or a deep-well plate
- Heat source (water bath, dry heat bath, thermo shaker)

Before start: Activation of Buffer ME

It is of highest importance that SwiftX™ Buffer ME is activated by addition of Component P before use. Follow these steps:

1. **Add 1mL Buffer ME into tube with dry Component P.**
2. **Pipet the buffer up and down at least 10 times until the powder is dissolved, and the solution is homogeneous.**
3. **Pipet dissolved Component P back into bottle with Buffer ME.**
4. **Turn the bottle with activated Buffer ME upside down 10 times to prepare a homogeneous solution. Mark the activation date on the bottle.**

Activated Buffer ME is stable for up to 4 weeks at 2-8°C or for up to 3 months at -20°C. If stored at -20°C, repeated freezing and thawing must be avoided.

Please note that according to CLP regulations activated Buffer ME is not considered a hazardous mixture due to the low concentration of the resuspended enzyme.

Extraction Procedure

This protocol describes the workflow of extraction of RNA and DNA from specimens present in transport media.

Make sure you have activated SwiftX™ Buffer ME before starting the extraction procedure.

1. **Mix 100µL transport medium sample with 200µL activated Buffer ME.**
2. **Incubate lysis mixture for 10 minutes at 90°C.**
3. **Cool down and immediately proceed with your detection assay. For that, homogenize the extracted nucleic acids by tapping or vortexing and then transfer an aliquot to your amplification tube.**

Application notes:

- The following transport media have been validated: Saline, PBS, UTM, VTM, Liquid Amies. Some VTM show precipitation during the extraction procedure. This does not influence the extraction efficiency.
- Samples containing a high amount of salt, e.g. guanidine hydrochloride, such as certain transport media and conservation media are not compatible with SwiftX™ Media, because the extracted nucleic acids will show a strong inhibitory effect on the downstream amplification reaction.
- It has been reported that the use of Component P for activation of Buffer ME is not compatible with the isothermal amplification technologies RPA and RAA.

Contacts and disclaimer

This product is owned by:

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

This product shall not be reused or resold without license by Xpedite Diagnostics.