

Instruction for Use

NukEx PLUS

Nucleic Acid Release Reagent

Reagent for the enzymatic release of DNA from bacterial cultures and swabs.

REF

G01073



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1 Intended Use

The NukEx PLUS Nucleic Acid Release Reagent is designed for the release of DNA from bacterial cultures and swabs. The crude lysates can be directly applied in molecular assays, e.g. real time PCR.

2 Principle of the Test

The NukEx PLUS Nucleic Acid Release Reagent causes the lysis of bacteria. The lysis is performed for 15 minutes at room temperature.

Nucleic acids released with NukEx PLUS Nucleic Acid Release Reagent can be analysed by employing the supernatants obtained directly in the subsequent molecular assay.

Pooling of the lysates prior to analysis is possible; however, it is subject to the purpose and regulations of the particular application.

3 Package Contents

4x 8.75 ml NukEx PLUS Nucleic Acid Release Reagent sufficient for 100 reactions.

4 Equipment and Reagents to be supplied by User

- Laboratory equipment according to national safety instructions
- Sterile pipet tips with filter
- Nuclease-free 1.5 or 2.0 ml microcentrifuge tube
- Optional: Liquid handling systems for automation (e.g. Myra, Bio Molecular Systems)

5 Transport and Storage

The NukEx PLUS Nucleic Acid Release Reagent must be stored $\leq -18^{\circ}\text{C}$. If properly stored, the product is stable until the date of expiry printed on the label.

Please note, that improper storage will adversely impact nucleic acid release due to decreased enzymatic activity. Therefore, NukEx PLUS Nucleic Acid Release Reagent is always shipped on dry ice.

6 Important Notes

- The NukEx PLUS Nucleic Acid Release Reagent must be utilized by qualified personnel only.
- Good Laboratory Practice (GLP) has to be applied.

- Clinical samples must always be regarded as potentially infectious material and all equipment used has to be treated as potentially contaminated.

7 Waste Handling

- Dispose of unused reagents and waste should occur in accordance with country, federal state and local regulations.
- Material Safety Data Sheets (MSDS) are available upon request.

8 Sample Material

Starting material are respiratory swabs (e.g. buccal swabs, nasal swabs, etc.) or bacterial culture samples.

9 Procedure

- Pipet 350 µl NukEx PLUS Nucleic Acid Release Reagent into an appropriate tube (e.g. 2 ml reaction tube, safe lock).
- Place the swab tip or the picked bacterial colony into the reaction tube and break or cut off the applicator at a length that allows the tube to be closed.
- Close reaction tube tightly.
- Vortex thoroughly 4- 5 times
- Incubate for 15 min at room temperature.

10 Storage of Crude Lysates

For storage conditions of crude NukEx PLUS Nucleic Acid Release Reagent lysates please refer to table 1.

Table 1: Storage conditions for crude lysates






Time	Storage Condition
up to 6 hours	Room temperature
up to 24 hours	+2 to +8 °C
long term storage	≤ - 18°C

11 Troubleshooting

The following troubleshooting guide is included to help you with possible problems that may arise in a subsequent PCR.

Neither sample nor Internal Control show a PCR signal	
Concentration of PCR inhibitors in the sample too high	Components present in the sample may inhibit the PCR. Therefore, dilute the supernatant 1:10 in dH ₂ O (PCR grade). If necessary, extract the nucleic acid from the crude lysate with a commercial extraction kit (e.g. NukEx Pure RNA/DNA) and repeat PCR analysis.
Taq-Polymerase damaged by NukEx PLUS	PCR run should be started immediately (max. within 15 – 20 min.) after pipetting the NukEx PLUS lysate into the reaction mix.
Negative PCR result for a known-positive sample, Internal Control shows no inhibition	
Kit stored under non-optimal conditions or kit expired	Store kit at ≤ -18°C. Do not use after the date of expiry printed on the label.
Incorrect incubation conditions	Make sure incubation conditions comply with the protocol.

12 Abbreviations and Symbols

DNA	Desoxyribonucleic Acid		Contains sufficient for <n> test
PCR	Polymerase Chain Reaction		Upper limit of temperature
LOT	Batch code		Manufacturer
CONT	Content		Use by YYYY-MM
REF	Catalog number		Consult instructions for use

13 Literature

- [1] Sambrook, J. and Russell, D.W.: Molecular Cloning, 2001.