

TECHNICAL SHEET

***qualyfast*[®] DNA Extraction kit I**

Fast DNA Extraction kit from clear water

INTENDED USE

qualyfast® DNA Extraction kit I product is a fast DNA extraction kit for clear water samples (water distribution systems, drinking water and different clear waters not containing overmuch suspended particles). This kit has been specifically designed for the extraction of DNA from Legionellae. Extracted DNA can be directly used in downstream applications, including PCR and qPCR, without the need for further purification. For guidelines to the sampling water procedure please refer to the relevant ISO norms.

PRINCIPLE

The kit starts with the filtration of a water sample onto a filter membrane. Bioside filter membranes are sterile, disposable, easy to use and very suitable for the recovery of Legionellae.

Bioside special Buffer is then added to the membrane. Rapid and thorough lysis occurs through vortex mixing in a reformulated lysis buffer that enhances the isolation of microorganism from filter membranes.

MATERIALS PROVIDED

- 0,45 µm – 47 mm Ø microporous filter membranes
- Bioside Enzyme mix (BE)
- Bioside Buffer (BB)

The provided quantity of reagents allows to carry out 24, 48 or 96 reactions as indicated in the table below.

Catalog Number	Number of reactions	Content
D1.01001	24	1 pack of 24 filter membranes 1 BE tube for 24 reactions 1 BB bottle for 24 reactions
D2.01001	48	2 packs of 24 filter membranes 2 BE tubes for 24 reactions each 2 BB bottles for 24 reactions each
D3.01001	96	4 packs of 24 filter membranes 4 BE tubes for 24 reactions each 4 BB bottles for 24 reactions each

MATERIALS REQUIRED BUT NOT PROVIDED

- Sterile forceps (rather disposable)
- 1,5 ml microcentrifuge capable of at least 10000 x g
- Nuclease-free 1,5 ml microcentrifuge tubes
- Drybath or water bath capable of 65 °C and 95° C
- Vortex
- Biological cabinet
- Filtered tips (aerosol barrier)
- Pipettor (capacity 2-20 µl, 20-200 µl)
- Disposable gloves, powderless
- Disposable, reusable filter funnels
- Vacuum filtration systems
- Freezer

ANALYSIS PROCEDURE

DNA Extraction kit I is validated for volume of water between 100 mL and 1 L.

Protocol:

1. Filter the clear water sample using filter membrane provided (0,45 µm) in a reusable or disposable filter funnels attached to a vacuum source; after filtering remove the filter from the adapter and place it in a clean 1,5 ml centrifuge tube;
2. Add 200 µl of Bioside Buffer (BB) (vortex 1min. Bioside Buffer before the use) and 4 µl of Bioside Enzyme mix (BE);
3. Vortex at maximum speed for 5 minutes;
4. Check that the membrane is totally immersed in lysis buffer and incubate 15 minutes at 65 °C and 15 minutes at 95 °C;
5. Centrifuge at 10000 x g for 1 minute at room temperature;
6. Transfer the supernatant into a clean 1,5 ml tube, leaving the filter membrane.

The DNA extracted can be stored at -20 °C.

It is recommended to use the DNA extracted immediately after thawing.

It is recommended to dilute the samples 3, 10 or 100 fold before the use in real time PCR. For clear water we recommend a dilution 1:3 because the extracted DNA is very concentrated and using undiluted DNA could give inhibition. For more corpusculated waters we recommend 1:10 while for the dilution 1:100 we recommend it only if there is inhibition referred to the previous cases.

WARNINGS AND PRECAUTIONS

For professional use only.

Products are not intended for human, animal or therapeutic use but for laboratory, diagnostic and/or research.

These products do not contain any dangerous substances in concentrations >1%.

All specimens, microbial cultures and inoculated products should be considered infectious and handled appropriately.

Aseptic technique and usual precautions for handling the bacterial group studied, should be observed.

Do not use the reagents behind expiry date.

No warranty is guaranteed for products beyond their listed expiry date. No warranty is applicable unless all product components are stored in accordance with instructions for use.

Bioside offers to his customers technical support and training.

STORAGE AND SHELF-LIFE

The kit is ready-to-use.

Store the products in its box at room temperature until the expiry date indicate in the label.

REFERENCES

- Anonymous. NF T90-471 Qualité de l'eau - Détection et quantification des Legionella et/ou Legionella pneumophila par concentration et amplification génique par réaction de polymérisation en chaîne en temps réel (RT - PCR). Association française de normalization; 2010.
- Anonymous. ISO/TS 12869, «Water quality e detection and quantification of Legionella spp. and/or Legionella pneumophila by concentration and genic amplification by quantitative polymerase chain reaction (qPCR)». International Organization for Standardization; 2012.
- Anonymous. NF148 - NF Mark VALIDATION Validation protocol for commercial methods of detection and quantification of Legionella and Legionella pneumophila by concentration and gene amplification by polymerase chain reaction (PCR). Revision 2 – Adopted by AFNOR Certification on 27 May; 2013.

PACKAGING SYMBOL



Catalogue number



Batch code



Consult instructions for use



Caution, consult accompanying documents



Temperature limitation



Keep away from sunlight



Keep dry, keep away from rain



Use by date



Manufacturer



Do not use if package is damaged



This way up