

foodproof[®] Magnetic Preparation Kit I

Order No. S 400 11 L

Quick Reference Procedure

Version 4, October 2013

The **foodproof** Magnetic Preparation Kit I in combination with the **foodproof** RoboPrep⁺ Series workstation provides fully automated purification of total genomic bacterial DNA from enrichment cultures of various food samples (raw material and processed food) and is optimized for Gram-negative bacteria. The DNA is suitable for direct use in PCR applications. The cells are lysed during a short incubation with the Lysis Buffer. After addition of the Binding Buffer the DNA selectively binds to the magnetic beads. Bound DNA is purified in three washing steps. The Elution Buffer releases the DNA from the beads.

A. Preparation of Kit Working Solutions

In addition to the ready-to-use solutions supplied with the kit, preparation of working solutions is required:

Bottle	Content	Preparation of working solution
No. 2 (green cap)	Binding Buffer	Add 80 ml absolute isopropanol
No. 3 (blue cap)	Wash Buffer I	Add 154 ml absolute isopropanol
No. 4 (blue cap)	Wash Buffer II	Add 164 ml absolute isopropanol

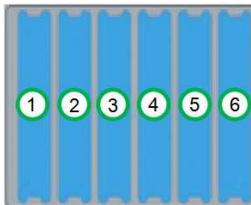
Check the box on the label of the bottle after isopropanol has been added. Add the date for verifiability. Store at 15 – 25 °C. Stable until the expiry date printed on kit label.

B. Additional Equipment and Reagents

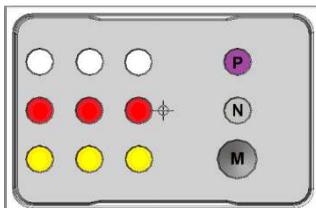
For protein-rich food samples (e.g. egg, pork, chicken, salmon, cheese), addition of Reagent P (Order No. A 500 12) to the Lysis Buffer is necessary. A protocol can be found in the manual of the Reagent P. All necessary plastic consumables are available through BIOTECON Diagnostics in a package (Order No. Z 600 01) for 960 reactions.

C. Placement Procedure

- Place the PCR plate, the elution micro plate and the process deep well plate at the appropriate starting positions.
- Place the disposable waste bag at the appropriate position.
- Load the metal racks with tips (1000 µl)
- Load the sample tubes into the rack
- Load the reagent containers and PCR setup rack with the following kit components



- 1: Lysis Buffer
- 2: Binding Buffer
- 3: Wash Buffer I
- 4: Wash Buffer II
- 5: Wash Buffer III
- 6: Elution Buffer



- White:** Internal Control
- Red:** Enzyme Solution
- Yellow:** Master Mix
- P:** Control Template
- N:** Negative control:
PCR-grade H₂O
- M:** 5 ml tube for PCR Mix



D. Protocol: Purification of total DNA from 200 µl food enrichment culture

1. Place **5 – 10 ml** of food enrichment culture into 12 ml **sample tubes**.
 2. Switch on the **foodproof RoboPrep⁺ workstation**. Allow the system to boot up.
 3. Double-click the **lirix3 shortcut icon** on the desktop.
 4. Enter **user name** and **password** on log-in screen. Note that a password was set for all users in the access control manager. Select OK.
 5. Select **method “foodproof_MPK_I_Process_vxx”** in the displayed screen “Application Setup – Methods”. Start the method by clicking on the run button
 6. Select **input variables** from the “Input Variables” dialog window.
 7. Choose the **number of samples: 1 – 96**.
 8. Choose the start position
 9. For **PCR setup**, choose whether a positive and a negative control should be included or not.
YES: PCR mastermix will be prepared for one positive and one negative control in addition to the number of samples.
NO: PCR mastermix will be prepared for the processed number of samples only.
 10. Choose the **appropriate volume for the Master Mix** according to the **used PCR Kit**:
If you are using a foodproof Detection Kit based on **5’Nuclease technology, choose 18**.
If you are using a foodproof Detection Kit based on **Hybridization Probes technology, choose 13**.
 11. Choose whether you want to conduct **DNA extraction**.
 12. Choose whether you want to conduct a **PCR setup**. Click OK to continue.
 13. In the “Start Run” dialog window, you can choose to **start the run with a new tip rack**.
If you do so, tips will be taken **starting from the first position of the first tip rack** defined in the labware layout.
If not, tips will be taken **starting from the next available tip** after the last used tip position. Switching from one method to another with a different process layout resets the used tip position back to the first position in the first rack.
 14. The **instrument is initialized** and the run starts.
 15. Place the **sample tubes** into the **sample tube racks**.
- Request for all necessary equipment and reagents:** The following dialog windows will guide you through the remaining steps required to set up the RoboPrep⁺ workstation for the “foodproof Magnetic Preparation Kit I Process”
16. Check the necessary volume of **Lysis Buffer** and fill it into the **first reagent reservoir**. Confirm with “continue”.
 17. Check the necessary volume of **Binding Buffer** and fill it into the **second reagent reservoir**. Confirm with “continue”.
 18. Check the necessary volume of **Wash Buffer I** and fill it into the **third reagent reservoir**. Confirm with “continue”.
 19. Check the necessary volume of **Wash Buffer II** and fill it into the **fourth reagent reservoir**. Confirm with “continue”.
 20. Check the necessary volume of **Wash Buffer III** and fill it into the **fifth reagent reservoir**. Confirm with “continue”.
 21. Check the necessary volume of **Elution Buffer** and fill it into the **sixth reagent reservoir**. Confirm with “continue”.
 22. Check the necessary plates. Place **elution plate, PCR plate** and the **process plate** at the start positions.
Confirm with “continue”.
 23. Check for the necessary **number of racks with filter tips** and place them on the deck beginning with the first tip rack defined in the labware layout. Confirm with “continue”.
 24. Check for the necessary **number of tips without filters** and place them into the defined rack. Confirm with “continue”.
 25. Check for the **PCR reagents** and place these into the **PCR setup rack**. Confirm with “continue”.
 26. Check for the **5 ml tube** for the **Master Mix preparation** and place it into the PCR setup rack and confirm with “continue”.

All next steps are fully automated, and a software message on the screen will indicate when the protocol is finished.

For further information please refer to: www.bc-diagnostics.de/?cid=1273215526&lang=1