foodproof® StarPrep Five Kit

Order No. S 400 21

Quick Guide
for DNA Extraction of Animal Products

Version 2, August 2019

Introduction

The **food**proof StarPrep Five Kit is designed for the rapid preparation of animal DNA for direct use in PCR. The entire DNA preparation can be performed in a single tube, minimizing handling steps and exposure to biohazardous material. The reduced number of handling steps results in time saving and, because transfer steps of DNA containing extracts are not necessary, the cross-contamination risk is minimized**.**

A. Kit Contents / Storage and Stability

Content	Storage
1 container with 30 ml Lysis Buffer	15 to 25 °C
2 container with 25 ml Buffer M	15 to 25 °C
1 bottle with 100 mg Proteinase K	15 to 25 °C, Dissolved, as aliquots: -15 to -25 °C

Kit for 96 reactions. The components of the **food**proof® StarPrep Five Kit are guaranteed to be stable through the expiration date printed on the label when stored at 15 to 25 °C.

B. Additional Equipment Required

- Double distilled water
- Sterile reservoir (optional suitable for an 8-channel pipette) and 2 ml reaction tubes
- Optional: 8-channel pipette (VOYAGER, INTEGRA Biosciences AG)
- Standard tabletop microcentrifuge capable of a 13,000 × g centrifugal force
- Two heating units suitable for 2 ml tubes
- Vortexer or Multi Plate Shaker (MPS-1 High-Speed Multi Plate Shaker, Biosan)

All instruments and equipment can be purchased from BIOTECON Diagnostics.

C. Preparation of the Working Solutions

The preparation of the following working solutions is required:

Product	Preparing of working solution	Storage and stability
1 bottle with 100 mg Proteinase K	Dissolve the Proteinase K in 5 ml double-distilled water, aliquot solution	Store at -15 to -25 °C Stable for 12 months

D. Applicability Statement

The kit can be used to prepare DNA from up to 200 mg food, feed or pharmaceutical products (e.g. gelatin capsules). The quality of the DNA obtained with the kit is suitable for any PCR application.

E. Precautions

In order to avoid cross-contamination use filter tips, wear lab coats and gloves at all times. Properly dispose of all contaminated materials, decontaminate work surfaces and use a biosafety cabinet whenever aerosols might be generated.

F. Before you Begin

- Thaw the Proteinase K.
- Warm one heating unit to 72 °C, the other heating unit to 95 to 100 °C.
  Note: Temperature in the sample tube will be 68 to 70 °C / 85 to 95 °C with these settings

G. Procedure for DNA Isolation

Step	Action	Time/g Time/Temp. Volume
1	**Weigh out 200 mg sample** and transfer the sample in a 2 ml reaction tube	200 mg
2	Prepare a **premix for n+1 reactions of (n+1) x 300 µl of StarPrep Five Lysis Buffer, add (n+1) x 500 µl of Buffer M and (n+1) x 45 µl of Proteinase K in a sterile reservoir** (Add an additional volume to adjust for pipetting errors) *For example, mix 1,800 µl of StarPrep Five Lysis Buffer with 3,000 µl of Buffer M and 270 µl Proteinase K for five DNA preparations.* **Note:** Shake Lysis Buffer before use	(n+1) x 300 µl (n+1) x 500 µl (n+1) x 45 µl
3	**Transfer 845 µl of mixed buffer (step 2) into the 2 ml sample reaction tube (step 1)** **Note:** Take care, that buffer is mixed in the reservoir by pipetting up and down just before pipetting to the sample	845 µl
4	**Mix** the sample by vortexing (5 sec) **or** **shaking** on the Biosan MPS-1 High-Speed Multi Plate Shaker at 2,800 rpm for 15 sec	5 sec **or** 15 sec at 2,800 rpm
5	**Incubate** sample in the heating unit at 72 °C **Note:** Gelatin in samples has to be completely dissolved: mix by inverting the tube after 60 sec of incubation at 72 °C, then start incubation for 15 min	15 min at 72 °C
6	**Incubate** sample in the heating unit at 95 °C **Note**: Temperature in the sample tube will be 85 to 95 °C with these settings. If only one heating unit is used, make sure that temperature has reached 95 °C	15 min at 95 °C
7	**Chill** 1 min at RT	1 min
8	**Centrifuge** **Result:** The supernatant now contains the extracted DNA and can be used directly for PCR	5 min at 13,000 × g
9	**PCR reaction volume:** Use 3 µl sample volume for the PCR reaction. For the **food**proof LyoKits, first add 22 µl H_2O, and then 3 µl sample extract, for a total volume of 25 µl. **Note:** If inhibition occurs sample has to be diluted 1:10	3 µl

For further information please refer to our detailed product manual on our website: www.bc-diagnostics.com

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