

PrepSEQ® Rapid Spin Sample Preparation Kit for Food Testing: *E. coli* O157:H7

Catalog Numbers 4426714, 4426715, 4407760, 4413269 Publication Number 4426518 Rev. B

Note: For safety and biohazard guidelines, refer to the “Safety” section in the *PrepSEQ® Rapid Spin Sample Preparation Kit for Food Testing: E. coli O157:H7 User Guide* (Pub. no. 4426519). For every chemical, read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

Product information

The PrepSEQ® Rapid Spin Sample Preparation Kit for Food Testing enables preparation of PCR-ready microbial DNA from broth cultures using spin-column technology.

Refer to the *MicroSEQ® E. coli O157:H7 Detection Kit User Guide* (Pub. no. 4426511) for information about NF Validation™-certified (AFNOR) and AOAC® Performance Tested MethodsSM-certified workflows for *E. coli* O157:H7. Visit www.lifetechnologies.com/foodsafety for a comprehensive list of workflows for detection of *E. coli*.

Kit contents and storage

The PrepSEQ® Rapid Spin Sample Preparation Kit for Food Testing contains reagents for 100 sample preparations.

| Item | Quantity or volume | Storage |
|--|--------------------|---------------------------|
| PrepSEQ® Rapid Spin Sample Preparation Kit with Proteinase K (Cat. no. 4426714) | | |
| Spin columns | 100 | Room temperature (23±5°C) |
| Microcentrifuge tubes, 1.5 mL | 100 | Room temperature (23±5°C) |
| Lysis Buffer, 1 bottle | 5 mL | 5±3°C |
| Proteinase K (20 mg/mL), 1 tube | 1.25 mL | Below -18°C |
| PrepSEQ® Rapid Spin Sample Preparation Kit – Extra Clean with Proteinase K (Cat. no. 4426715) | | |
| Spin columns | 100 | Room temperature (23±5°C) |
| Microcentrifuge tubes, 1.5 mL | 2 × 100 | Room temperature (23±5°C) |
| Lysis Buffer, 1 bottle | 5 mL | 5±3°C |
| Proteinase K (20 mg/mL), 1 tube | 1.25 mL | Below -18°C |
| PrepSEQ® Rapid Spin Sample Preparation Kit (Cat. no. 4407760) | | |
| Spin columns | 100 | Room temperature (23±5°C) |
| Microcentrifuge tubes, 1.5 mL | 100 | Room temperature (23±5°C) |
| Lysis Buffer, 1 bottle | 5 mL | 5±3°C |
| PrepSEQ® Rapid Spin Sample Preparation Kit – Extra Clean (Cat. no. 4413269) | | |
| Spin columns | 100 | Room temperature (23±5°C) |
| Microcentrifuge tubes, 1.5 mL | 2 × 100 | Room temperature (23±5°C) |
| Lysis Buffer, 1 bottle | 5 mL | 5±3°C |

Note: Parts may ship separately depending on configuration and storage conditions.

Overview of food testing

Use the PrepSEQ® Rapid Spin Sample Preparation Kit for Food Testing to prepare food samples to test for *E. coli* O157:H7. The kit is designed for preparation of DNA from most food types. The kit procedure involves:

- Enrichment of food samples for *E. coli* O157:H7
- Sample preparation

For sample preparation from enriched food samples, start with a 750-µL sample volume.

For some foods with high protein content, use the PrepSEQ® Rapid Spin Sample Preparation Kit – Extra Clean with Proteinase K (Cat. no. 4426715). Refer to the *PrepSEQ® Rapid Spin Sample Preparation Kit for Food Testing: E. coli O157:H7 User Guide* for detailed information.

Before you begin

Before starting your sample extraction:

- Set the block heater temperature to 95°C. If using the Proteinase K treatment, set another block heater to 56°C.
- Label the 1.5-mL microcentrifuge tubes.
- For processing multiple samples in workflows that require Proteinase K treatment, we recommend preparing a Proteinase K-Lysis Buffer mix:

Premix 5 µL of Proteinase K (20 mg/mL) with 50 µL of Lysis Buffer for each sample (use a clean appropriately-sized container for mixing). Multiply volumes by the number of samples plus 10% for overage. Mix well to disperse Proteinase K in Lysis Buffer. Use immediately, or store on ice until ready to use.

General differences between PrepSEQ® Rapid Spin workflows

This document presents protocols for three different workflows, with general differences outlined below. To determine which enrichment protocol you should follow for your sample, you will need to consider the sample amount and select a workflow based on your preferred media and enrichment time.

| Protocol | Sample amount | Media | Enrichment time† | Enrichment volume required for sample prep | Food type/ Proteinase K requirement |
|-----------------------|-----------------------|--------------------------------------|--------------------------------|--|---|
| Enrichment workflow A | 25 g or 25 mL of food | Prewarmed BHI (Brain Heart Infusion) | 6–8 hr (8–10 hr for juices) | 750 µL | Animal products‡: with Proteinase K |
| | | | | | Non-animal products: without Proteinase K |
| Enrichment workflow B | 25 g or 25 mL of food | BPW (Buffered Peptone Water) | 16–20 hr | 750 µL | Animal products: with Proteinase K (optional)§ |
| | | | | | Non-animal products: without Proteinase K |
| Enrichment workflow C | 375 g of food | BPW | 16–20 hr | 750 µL | All foods: with Proteinase K |

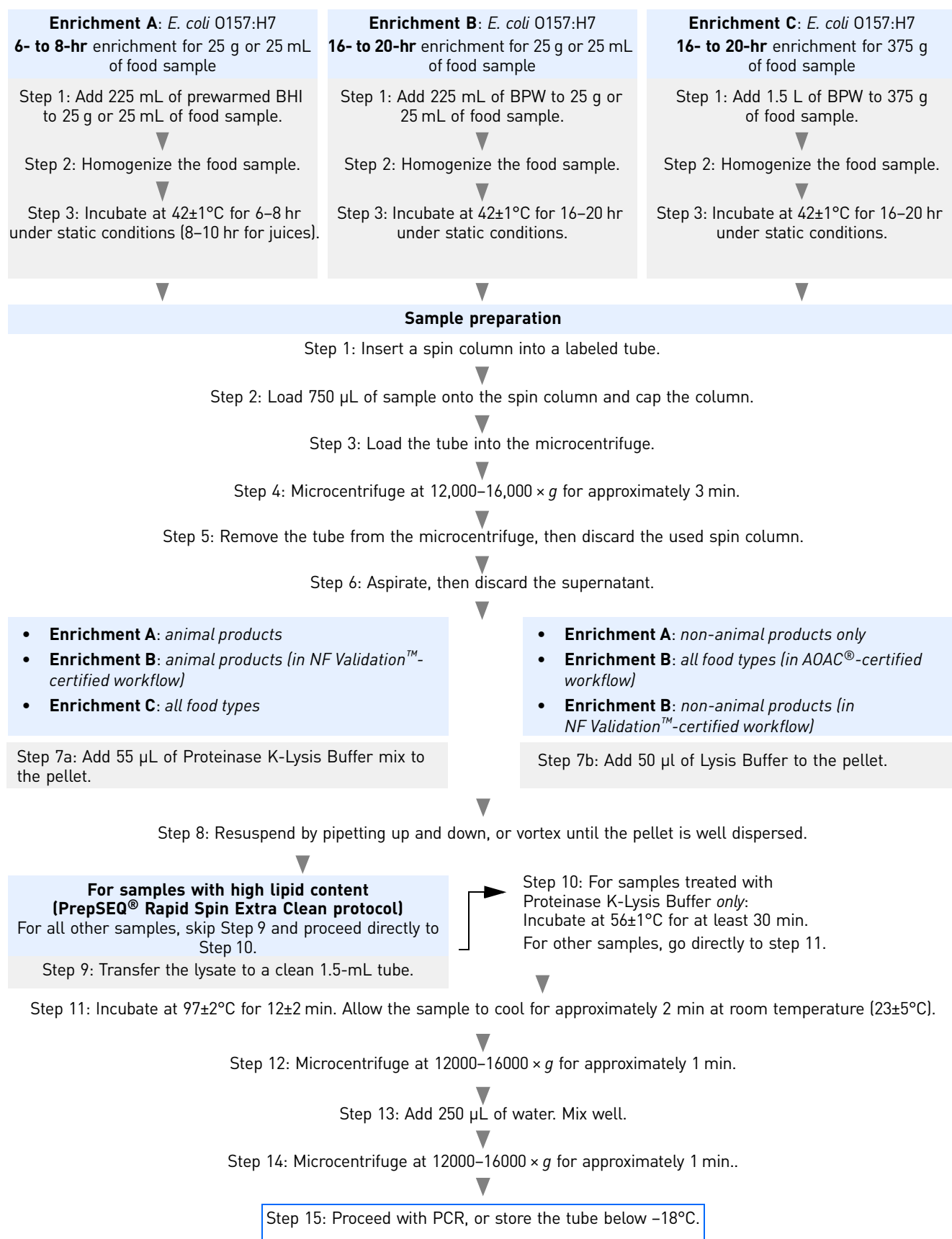
IMPORTANT! Enrichment workflow C (sample amount = 375 g of food) was included in AOAC® certification studies but not in NF Validation™ studies.

† All enrichments are incubated at 42±1°C.

‡ Animal products include ground beef, beef trim, fish, and milk.

§ For Enrichment workflow B, Proteinase K was used in NF Validation™ studies; it was not used in AOAC® validation studies.

Kit workflow



For testing of Food and Environmental samples only.

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NOTICE TO PURCHASER: PLEASE REFER TO THE PREPSEQ® NUCLEIC ACID EXTRACTION KIT FOR FOOD TESTING: E. COLI O157:H7 USER GUIDE FOR LIMITED LABEL LICENSE OR DISCLAIMER INFORMATION.

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