KPL BacTrace®
Anti-*E. coli* O103
Magnetic Beads

Catalog No.	Size
5350-0041 (082-01-95-93)	1 mL

DESCRIPTION

KPL BacTrace Anti-*Escherichia coli* O103 Magnetic Beads are super-paramagnetic polystyrene beads coated with SeraCare's KPL BacTrace Anti-*E. coli* O103 antibody. They are intended for use in the isolation and separation of *E. coli* O103 from a variety of samples (food, animal feed, environmental samples, etc.). Immunomagnetic separation offers a rapid means of separating *E. coli* O103 from complex mixtures prior to immunodetection assays, PCR or other culture techniques.

FORM/STORAGE

Suspension. Store at 2-8°C. DO NOT FREEZE! Stable for a minimum of 1 year from date of receipt when stored at 2-8°C.

STABILIZER AND PRESERVATIVE

Bovine Serum Albumin (BSA) is added as a stabilizer. 0.02% sodium azide is added as a preservative. Non-sterile.

BEAD CONCENTRATION

Beads are provided at a concentration of > 1 x 10^9 beads/mL. Beads are approximately 2 µm in size. One vial provides enough material to perform 50 extractions when using 1 mL of enriched culture.

MATERIALS REQUIRED BUT NOT PROVIDED

Wash Buffer:

- 0.5 g BSA, 50 µL Tween 20 in 100 mL Buffered Peptone Water
- Magnetic Separator
- Sterile 1.5 mL Microfuge Tubes
- 1 mL Pipette and Sterile Tips
- 20 µL – 200 µL Pipette and Sterile Tips
- Lab Rotator

SUGGESTED PROTOCOL

PLEASE NOTE: Working with pathogenic bacteria requires that certain safety measures be followed. Please follow all required aseptic techniques, as well as good laboratory practice. Endeavor to avoid aerosol formation, and perform necessary work in a biosafety cabinet. All contaminated materials should be autoclaved or disinfected prior to disposal. Follow all pertinent regulations.

Prior to use: perform enrichment steps according to established protocols.

1. After enrichment, homogenize the sample as recommended (e.g. – stomacher). Allow sample to settle for 2 – 5 minutes.
2. Resuspend magnetic beads by inverting several times or vortexing.
3. Pipette 1 mL of homogenized culture into a sterile microfuge tube, taking care to avoid any debris remaining in the sample.
4. Add 20 µL of magnetic beads to the sample. Incubate while rotating for 15 minutes.
5. Place the tube in a magnetic separator for 3 minutes.
6. Carefully remove the supernatant from the tube and discard.
7. Add 1 mL of wash buffer.
8. Remove from separator and invert several times.
9. Repeat steps 5-8 four additional times, for a total of five washes.
10. The beads binding bacteria are now ready for plating or other protocols.

Total protocol time is approximately 45 minutes.

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REFERENCES

1. Detection and Isolation of non-O157 Shiga Toxin-Producing *Escherichia coli* (STEC) from Meat Products. USDA SOP No. MLG 5B.03. 2012, pgs. 12 – 15.
2. Gehring, et. al. Enzyme-linked Immunomagnetic Electrochemical Detection of *Salmonella Typhimurium. J Immunol Methods*. 1996 Sep 9;195(1-2):15-25.

PRODUCT SAFETY AND HANDLING

This product is considered non-hazardous as defined by The Hazard Communication Standard (29 CFR 1910.1200). Avoid contact with skin and eyes. In case of contact or spillage, clean with copious amounts of water. Dispose of via institutional guidelines.

RELATED PRODUCTS	CAT. NO.
KPL Anti-*E. coli* O103 Antibody	5310-0330 (01-95-93)

The product listed herein is for research use only and is not intended for use in human or clinical diagnosis.