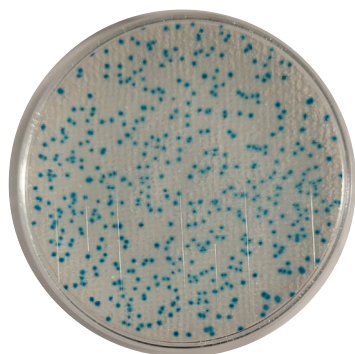




Compact Dry™ ECO

Ready-to-Use Medium for
Escherichia coli



Background

It is important to detect and measure *Escherichia coli* in food products and the food environment to monitor the degree of exposure and limit the possibility of food poisoning, especially as *E. coli* is an indicator of fecal contamination.

To save operator time and make it possible for anyone to perform the microbial count test without difficulty, Compact Dry was developed based on a new concept and technology applicable to the food industry. Compact Dry allows for easy addition of a sample to the device.

Detection

Compact Dry plates are ready to use and require no prepared medium. *E. coli* will form blue colonies. Isolated colonies can be subcultured individually to other media.

Warnings and Precautions

1. General precautions

- Read and follow precisely the warnings and directions for use described in the package insert and/or label.
- Do not use the product after its expiration date. Quality of the product is not warranted after its shelf life expires.
- Do not use product that contains any foreign materials, is discolored or dehydrated, or has a damaged container.
- Use plates as soon as possible after opening. Return any unused plates to the aluminum bag and seal with tape to avoid light and moisture.
- Cap tightly after inoculation to avoid dehydration of gelled medium.

2. Safety precautions

- If medium or reagent comes into contact with eyes or mouth, immediately wash with water and consult a physician.
- Procedures with microorganisms involve certain risks of laboratory-acquired infections. Procedures should be carried out under the supervision of trained laboratory personnel with biohazard protection measures.
- Treat any laboratory equipment or medium that comes into contact with the specimen as infectious and sterilize appropriately.

3. Precautions for disposal of waste

- Sterilize any medium, reagent or materials by autoclaving or boiling after use, and then dispose of it as industrial waste according to local laws and regulations for disposal of such material.

4. User responsibilities

- It is the user's responsibility in selecting any test method to evaluate a sufficient number of samples with particular foods and microbial challenges to satisfy the user that the chosen test method meets the user's criteria.
- It is the user's responsibility to determine that any test methods and results meet its customers or suppliers' requirements. The user must train its personnel in proper testing techniques.
- It is the user's responsibility to validate the performance of this method for use with any non-certified matrix.

5. Limitation of warranties

- Compact Dry plates are manufactured at ISO 9001:2015 facility. If any Compact Dry plate is proven to be defective by fault of the manufacturer or its authorized distributors, they may replace or, at their discretion, refund the purchase price of any plate. These are the exclusive remedies.

Storage and Shelf Life

Storage: Keep at room temperature (1–30°C)

Shelf life: Twenty-four (24) months after manufacturing. Expiration date is printed on outer box label and aluminum bag label.

Package

Compact Dry ECO 100 plates Code 54064

Compact Dry ECO 1400 plates Code 54064-CS

Further Information

Customer Support

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Kit components, operating
instructions and interpretation



Test Kit Components

1. Compact Dry ECO plates

Additional Reagents and Supplies Required, Not Provided

1. Butterfield's phosphate-buffered diluent (BPBD) — Prepare according to AOAC 966.24
2. Maximum recovery diluent (MRD) — Prepare according to ISO 4833:2006
3. Filtered Stomacher bags

Apparatus

1. Blender or Stomacher or equivalent for homogenizing sample
2. Pipets: 1 ml
3. Incubator: 35 ± 1°C or or 37 ± 1°C

Operating Procedure

Preparation of specimen

1. **Prepare diluent:** Butterfield's phosphate buffered diluent (or Maximum recovery diluent (MRD) is recommended. Autoclave for sterilization.
2. **Viable count in solid food:** Add diluent to the solid sample. Homogenize by Stomacher for 1 minute ± 10 seconds.
3. **Viable count in water or liquid food:** Use without dilution, dilute 1 ml in 9 ml diluent, or dilute further in case the viable count is expected to be >250 cfu/ml. Vortex to mix.
4. **Viable count in swab test sample:** Use wiping solution (without dilution or diluted if necessary in diluent) obtained from the cotton swab. It is recommended to use the Easy Wiping Kit, available as an optional kit.

pH Adjustment: The pH of the product or 1:10 dilution of product should be between 6 and 7 for optimal growth of target microorganisms. If the pH is not between 6 and 7, adjust the pH of the product or 1:10 dilution with 1 N or 0.1 N NaOH for acidic products or 1 N or 0.1 N HCl for alkaline products.

Directions for Compact Dry ECO

1. Open an aluminum bag and take out a set of four plates.
2. Detach the necessary number of plate(s) from a set of four by bending up and down while pressing the lid. Use a set of four connected plates when serial dilution measuring is intended.
3. Remove cap from plate, pipette 1 ml of sample (to be diluted further if necessary) in the middle of the dry plate and replace cap. Specimen diffuses automatically and evenly over the entire plate (total medium of 20 cm²) to transform it into a gel within seconds.
4. Write the appropriate sample information in the memorandum section. Invert the capped plate and place in incubator at 35 ± 1°C or 37 ± 1°C for 24 ± 2 hours.
5. From the backside of the plate, count the number of colonies (colored and colorless) in the medium. White paper placed under the plate can make colony counting easier. For large numbers of colonies, use the grids carved on the backside consisting of 1 cm x 1 cm, or 0.5 cm x 0.5 cm, at the four corners.

Precautions for Use

1. Do not use Compact Dry EC for human and animal diagnosis.
2. To avoid microbial contamination, do not touch the surface of the dry sheet medium during inoculation.
3. During incubation, keep cap tight to avoid any possible dehydration.
4. Use of filtered Stomacher bags is recommended to eliminate risks of carryover of tiny pieces of foodstuffs onto the surface of the medium.
5. The enumeration range is 1–250 cfu/plate. Dilute samples further in the appropriate diluent as necessary to achieve a concentration level in the countable range.
6. If the nature of sample affects the reaction of the medium, inoculate the sample only after the factor has been eliminated by means such as dilution, pH adjustment or other. This may include samples with high viscosity, that are colored, that react with the chromogenic enzyme substrate, or that have too high or too low pH.

Interpretation

E. coli form blue colonies due to chromogenic enzyme substrate, X-gluc contained in the medium.

Precautions for Interpretation

1. *E. coli* O157 do not produce beta-glucuronidase, and can not be detected on Compact Dry ECO plates. *E. coli* O157 form white colonies.
2. If more than 10⁴ cfu/ml were inoculated onto a plate, no distinguishable colored colonies will form and the entire plate may become colored.
3. The full plate size is 20 cm². The backside contains carved grids of 1 cm x 1 cm and 0.5 cm x 0.5 cm to make colony counting easier. If large numbers of colonies are present on the medium, the total viable count can be obtained by averaging the number of colonies per large grid (1 cm x 1 cm), counted from several grids, and multiplying by 20.