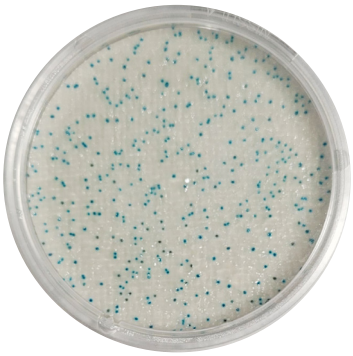
Compact Dry™ ETC

Ready-to-Use Medium for
Enterococcus



PERFORMANCE TESTED
AOAC
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LICENSE NUMBER 111902

Background

It is important to detect and determine the bacterial count in food products and the environment to monitor the degree of cleanliness as well as sanitary safety. A mixing and dilution culture method has been widely used to determine the microbial count, but this method is time-consuming and requires complicated operations such as preparation of hot agar, uniform dilution and smearing. 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.

Compact Dry ETC is a ready-to-use medium to determine *Enterococcus* species, including *E. avium*, *E. casseliflavus*, *E. durans*, *E. faecalis*, *E. faecium*, *E. gallinarum*, *E. haemoperoxidus*, *E. hirae*, *E. malodoratus*, *E. mundtii*, *E. pseudoavium*, and *E. thailandicus* by the combination of selective agents and chromogenic substrates.

Certification by AOAC

Compact Dry ETC has been compared to Nordic Committee on Food Analysis (NMKL) reference method 68 and certified by the AOAC Research Institute Performance Tested Methods℠ Program (Certificate No. 111902) for enumeration of *Enterococcus* spp. in frozen ground beef patties, raw beef, fresh cooked prawns, tuna pâté, cream, custard, lettuce, parsley, pasta salad, and egg salad sandwiches.

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: Eighteen (18) months after manufacturing. Expiration date is printed on outer box label and aluminum bag label.

Package

Compact Dry ETC 100 plates	Code 54056
Compact Dry ETC 1400 plates	Code 54056-CS

Further Information

Customer Support

Shimadzu Diagnostics Corporation
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Shimadzu Diagnostics Corporation
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Kit components, operating instructions and interpretation ➤

Compact Dry™ ETC

Test Kit Components

1. Compact Dry ETC Plates

Additional Reagents and Supplies Required, Not Provided

1. Maximum recovery diluent (MRD) — Prepare according to NMKL 68 or source commercially
2. Filtered Stomacher bags

Apparatus

1. Lab paddle blender, blender, or vortex mixer for homogenizing sample
2. Pipets: 1 ml
3. Incubator: 37 ± 1°C

Operating Procedure

Preparation of sample

1. **Bacterial number in solid food products:** Add buffering solution to the sample, and homogenize for 1 min. Drop 1 ml of specimen (to be further diluted if necessary) in the middle of a dry Compact Dry plate.
2. **Bacterial number in water or liquid food products:** Drop 1 ml of specimen (to be diluted if necessary) in the middle of a dry plate.
3. **Bacterial number in swab test specimen:** Drop 1 ml of wiping solution (to be diluted if necessary), obtained from a cotton swab, in the middle of a dry plate. It is recommended to use Swab Test ST 25PBS (Code 06698) available as an optional kit.

Directions for Compact Dry ETC

1. Open aluminum pouch 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 cm^2) to transform it into a gel within seconds.
4. Write the appropriate sample information in the memorandum section. Cap plate tightly, turn over, and place in incubator at 37 ± 1°C for 20–24 hours.
5. Count blue/blue-green colonies for *Enterococcus* species. White paper placed under the plate can be useful for counting.

Precautions for Use

1. During inoculation, do not touch the surface of medium and/or tip of pipette, and be careful to avoid any contamination by falling microorganisms.
2. During incubation, keep lid of Compact Dry plate tight to avoid any possible dehydration.
3. It is recommended to use a Stomacher bag with filter to eliminate risks of contamination by food particles.
4. Specimen should be diluted by buffer solution to the level of concentration of less than 200 cfu/plate.
5. If bacteria of more than 10^4 cfu are inoculated in a plate, no independent colonies will be formed, and the whole medium will turn blue.
6. Specimens with high viscosity, deep color, and too high or too low pH may affect results. The specimen should be analyzed only after the cause has been eliminated by dilution, buffering, or other means.

Interpretation

Enterococcus species form blue/blue-green colonies of 1–2 mm in diameter by chromogens contained in the medium.

Compact Dry ETC shows equivalent performance to the reference method NMKL Method 68, 5th edition 2011.

Precautions for interpretation

1. The Compact Dry plate size is 20 cm^2 , and the back of plate has a carved grid of 1 cm x 1 cm to make colony counting easier. When it is difficult to count the colonies due to a large number, the total bacterial number can be obtained by multiplying the average number of colonies from representative grids (1 cm x 1 cm) by 20. The plate count should be adjusted for the dilution factor.
2. *Lactobacillus gassari* can cause false positive results.

