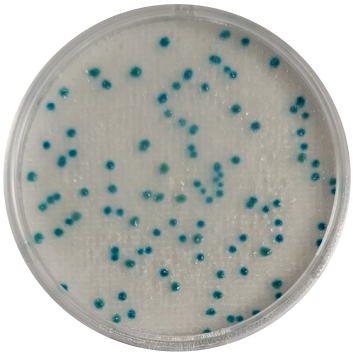
Compact Dry™ CF

Ready-to-Use Medium for
Coliform



PERFORMANCE TESTED
AOAC
RESEARCH INSTITUTE
LICENSE NUMBER 110401

Background

It is important to detect and measure coliform in food products and the food environment to monitor the degree of exposure and limit the possibility of food poisoning. The pour plate method has been widely used to determine microbial counts, however, it is time consuming and complicated, requiring operations such as preparation of hot agar maintained at 45–50°C, and uniform mixing and dilution. 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.

Certification by AOAC

Compact Dry CF has been compared to AOAC Official Method℠ 966.24 and certified by the AOAC Research Institute Performance Tested Method℠ Program (Certificate No. 110401) for enumeration of coliforms in raw meat (raw ground beef, raw ground pork, raw pork, raw lamb, and raw veal). A matrix extension comparing Compact Dry CF to ISO 4832:2006 for cooked chicken, fresh prewashed bagged shredded iceberg lettuce, frozen cod filets, instant nonfat dry milk, and pasteurized 2% milk was approved in 2015.

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. Compact Dry CF is sensitive to light, which affects color development of colonies.
- 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 CF 100 plates	Code 54053
Compact Dry CF 1400 plates	Code 54053-CS

Further Information

Customer Support
Shimadzu Diagnostics Corporation
3-24-6, Ueno, Taito-ku, Tokyo 110-0005 Japan
Phone: +81-3-5846-5707
contact@sdc.shimadzu.co.jp

Manufactured by

Shimadzu Diagnostics Corporation
3-24-6, Ueno, Taito-ku, Tokyo 110-0005, Japan

Kit components, operating instructions and interpretation ➤

Test Kit Components

1. Compact Dry CF 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. Pipet:s 1 ml
3. Incubator: 35 ± 1°C (raw meat products) or 37 ± 1°C (all other matrices)

Operating Procedure

Preparation of specimen

1. **Prepare appropriate diluent:** Butterfield's buffered phosphate diluent (BPBD) for raw meat products or Maximum Recovery Diluent (MRD) for other claimed matrices. Autoclave for sterilization.
2. **Viable count in solid food products:** For raw meat, weigh 50 g of sample and add 450 ml BPBD to the sample. Homogenize by blender for 2 min ± 15 s. For cooked chicken, fresh lettuce, or frozen fish, weigh 10 g of sample and add 90 ml MRD. Homogenize by Stomacher for 1 minute ± 10 seconds. For milk powder, weigh 10 g of sample and add to 90 ml MRD pre-warmed to 45 ± 1°C. Slowly swirl and shake until sample is dissolved.
3. **Viable count in liquid food products:** For pasteurized milk, use without dilution, dilute 1 ml in 9 ml MRD, or dilute further if viable count is >250 cfu/plate. Vortex to mix.
4. **Viable count in swab test sample (not included in AOAC PTM certification):** Use wiping solution (without dilution or diluted if necessary in MRD) obtained from the cotton swab. It is recommended to use Swab Test ST-25PBS (Code 06698) available as an optional kit.

Directions for Compact Dry CF

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 plates being connected 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. Invert the capped plate and place in incubator at 35 ± 1°C for raw meat or 37 ± 1°C for all other matrices. Incubate 24 ± 2 hours.
5. From the backside of the plate, count the number of blue/blue-green colonies 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.
6. Enumeration range of Compact Dry CF is 1–250 cfu/plate. Specimen should be diluted in the appropriate diluent to obtain a concentration level in the countable range.

Precautions for Use

1. Do not use Compact Dry CF 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. If more than 10^4 CFU/ml were inoculated onto a plate, no distinguishable colored colonies will form and the entire plate will become colored.
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

1. The medium contains the chromogenic enzyme substrate X-gal. Colonies grown on Compact Dry CF are blue/blue-green. Growth of bacteria other than coloforms is inhibited and if they grow, the colonies are not colored. Count only blue/blue-green colonies.
2. The full plate size is 20 cm^2. 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. Alternatively, the total viable count can be obtain by averaging the number of colonies per small grid (0.5 cm x 0.5 cm), counted from several grids, and multiplying by 80.

