

CompactDry™ BC

Simple and Easy Dry Medium for *Bacillus cereus*

*Background

It is important to detect and determine the bacterial number in foodstuffs and environment to monitor the degree of cleanness as well as their sanitary safety. Mixing and dilution culture method has been widely used to determine the microbial count. The method requires much time and complicated operations such as preparation of hot agar, mixing and dilution uniformly and/or spreading. To reduce the operating time and make it possible to perform the bacteria culture test without difficulty, the CompactDry™ was developed based on a unique concept and technology.

CompactDry™ BC is a simplified medium to determine *B. cereus* by the combination of selective agents and chromogenic substrates.

*Features and Benefits

- 1) Small and compact plate: Need only small physical spaces for storing, testing and incubating.
- 2) Ready to use and portable plate: No need to prepare medium, which eliminates waste of medium as well as need for apparatus to prepare the medium. Good for an emergency and a field test.
- 3) Sample diffuses automatically and evenly into a plate.
- 4) Easy to store: 21 month shelf life at 1~30°C.
- 5) Measurable after incubation for 24 hours.
- 6) Blue/pale blue colonies for *B. cereus* are observed, and picking colonies off medium is easy.
- 7) Good correlation with spread plate method: Maintain the continuity of data accumulated.

*Intended Use

This product is intended for use by microbiologists for the enumeration of *Bacillus cereus* in food and related samples.

*Certification by AOAC

The CompactDry™ BC has been compared to ISO 7932:2004 and certified by the AOAC Research Institute *Performance Tested Methods*™ Program (Certificate No. 092201) for enumeration of *Bacillus cereus* in panna cotta (with raspberries), double cream (50% fat), dried baby food (cereal-based with strawberry and raspberry flakes), dried vegetable soup mix, surimi seafood sticks, salmon pâté, sliced ham, pork liver pâté, sandwiches (ham and cheese on malted brown bread), and pasta salad (with chicken, bacon, and Caesar dressing).

*Operating Procedure

Preparation of specimen

- 1) Bacterial number in solid foodstuffs:
Prepare test sample according to ISO 6887 and ISO 7218. Homogenize a 10 g test portion in 90 mL of MRD, Phosphate Buffered Saline, Saline or appropriate diluent using a stomacher for 1 min ± 10 s. Drop 1 ml of specimen (to be further diluted if necessary) in the middle of a dry sheet of CompactDry™.
- 2) Bacterial number in water or liquid foodstuffs:
Drop 1 ml of specimen (to be diluted if necessary) in the middle of a dry sheet.
- 3) Bacterial number in swab test specimen: (not included in AOAC PTM certification).
Drop 1 ml of wiping solution (to be diluted if necessary), which is obtained from a cotton swab, in the middle of a dry sheet. It is recommended to use CompactDry Swab PBS (450002-PBS-0500) available as an optional kit.

*Direction

- 1) Open aluminum pouch, and take out a set of 4 plates.
- 2) Detach the quantity needed from a set of four by bending up and down while pressing the lid. Use a set of four connected plates when a series of diluted samples is inoculated.
- 3) Remove the lid of the plate and drop 1 ml of specimen in the middle of a dry sheet. Replace the lid. The sample diffuses automatically and evenly over the sheet (a medium size of 20 cm²) and rehydrates the gel.
- 4) Turn over the capped plate and incubate for 24 ± 2 hours at 30 ± 1 °C.
- 5) Count blue/pale blue colonies. White paper placed under the plate can be useful for counting.

*Precaution for use

- 1) During inoculation, do not touch the surface of medium and/or tip of dropper, and be careful to avoid any contamination by falling microorganism.
- 2) During incubation, keep lid tight on CompactDry™ to avoid any possible dehydration.
- 3) It is recommended to use a stomacher bag with filter to eliminate risks of carry-over of tiny pieces of foodstuffs into the surface of the medium.
- 4) Specimen should be diluted by buffer solution to the level of concentration of less than 150 cfu/plate.
- 5) If bacteria of more than 10⁴ cfu are inoculated in a plate, no independent colonies are formed, and the entire plate may become colored.
- 6) If the nature of specimen does affect the result, the specimen should be inoculated only after the cause is eliminated by means such as dilution and others. For example: specimens having such as high viscosity, reactivity with chromogens, deep color, and too high or too low pH.
- 7) Do not use CompactDry™ BC for human or animal diagnosis.

*Interpretation

- 1) *Bacillus cereus* forms blue/pale blue colonies due to chromogens contained in the medium.
- 2) If blue/pale blue colonies appear, a confirmation step using sheep blood agar must be done in accordance with ISO 7932.

*Precaution for interpretation

- 1) The full plate size is 20 cm². The backside contains carved grid 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.
- 2) Though some bacteria other than *B. cereus* may also grow and form white colonies in this plate, only blue/pale blue colonies should be counted.
- 3) Other related *Bacillus cereus* group species e.g. *Bacillus thuringiensis*, *Bacillus weihenstephanensis*, *Bacillus mycoides*, may also grow and form blue/pale blue colonies. Some bacteria other than *Bacillus cereus* group that grow on MYP may also become blue/pale blue.

*Warning and Direction for Use

1. General precautions

- 1) Read and follow precisely the warning and direction for use described in the package insert and/or label.
- 2) Do not use the product after its expiry date. The quality of expired products is not warranted.
- 3) Do not use the product that contains any foreign materials, is discolored, is dehydrated, or has a damaged container.
- 4) Use plates as soon as possible after opening. Any unused plates should be returned to the aluminum pouch and sealed with tape to avoid light and moisture.

2. Precautions for safety

- 1) In case that media or reagents touches eyes or mouth, immediately wash with a plenty of water, and consult a physician.
- 2) Manipulations with microorganisms involve certain risks of laboratory-acquired infections. Manipulations should be practiced under the supervision of skillful specialist with biohazard protection measures.
- 3) Any laboratory equipment and medium that comes in contact with specimen should be regarded as infectious in the laboratory.

3. Precautions for disposal of waste

Any media, reagents and materials must be sterilized by autoclaving after use, and then disposed as industrial waste products according to the local Law on Waste Disposal and Cleaning. Also follow current local laws and regulations related to dispose.

4. Limitation of Warranties

CompactDry™ plates are manufactured at ISO 9001:2015 facility.

If any CompactDry™ 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 1~30 °C.

Shelf life

Twenty-one (21) months after manufacturing.

Shelf life is printed on the labels of outer box, aluminum bag.

Package

CompactDry™ BC 100 plates

Code HS9721

Further information

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Issue date : July 2023

* Revised : October 2024

SDE-IFU-BC-2024-V3