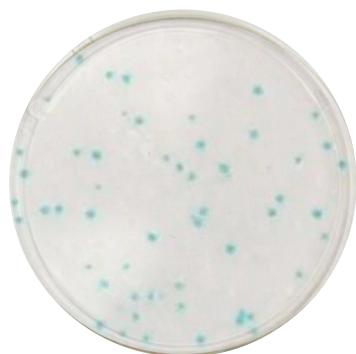




## Compact Dry™ BC

Ready-to-Use Medium for  
**Bacillus cereus**



### Background

It is important to detect and determine the bacterial number in food products and the food environment to monitor the degree of cleanliness and sanitary safety. A mixing and dilution culture method has been widely used to determine microbial count. The method is time-consuming and requires complicated operations such as preparation of hot agar, mixing a dilution uniformly and/or spreading. To save operator time and make it possible for anyone to perform a bacterial count test without difficulty, Compact Dry was developed based on a new concept and technology applicable to the food industry. Compact Dry BC allows for easy addition of a sample to the device, and uses a simplified medium to determine *B. cereus* by the combination of selective agents and chromogenic substrates.

### Intended Use

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

### Certification by AOAC

**Compact Dry BC** has been compared to ISO 7932:2004 and certified by the AOAC Research Institute Performance Tested Methods<sup>SM</sup> 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).

### 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 BC 100 plates      Code 54068  
Compact Dry BC 1400 plates      Code 54068-CS

### Further Information

#### Customer Support

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

### Manufactured by

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

**Kit components, operating instructions and interpretation** ➤

## Operating Procedure

### Preparation of specimen

- Bacterial number in solid food products:** 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 Compact Dry plate.
- Bacterial number in water or liquid food products:** Drop 1 ml of specimen (to be diluted if necessary) in the middle of a dry Compact Dry plate.
- 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 plate. It is recommended to use Swab Test ST 25PBS (Code 06698), available as an optional kit.

## Directions for Compact Dry BC

- Open an aluminum bag and take out a set of four plates.
- 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.
- 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<sup>2</sup>) to transform it into a gel within seconds.
- Write the appropriate sample information in the memorandum section. Invert the capped plate and place in incubator for 24 ± 2 hours at 30 ± 1°C.
- From the backside of the plate, count the number of pale blue 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.

## Precautions for Use

- Do not use Compact Dry BC for human and animal diagnosis.
- During inoculation, do not touch the surface of medium and/or tip of pipette, and be careful to avoid any contamination by falling microorganism.
- During incubation, keep the lid tight to avoid any possible dehydration.
- It is recommended to use a Stomacher bag with filter to eliminate risks of contamination with tiny pieces of food.
- Specimen should be diluted by buffer solution to the level of concentration of less than 150 cfu/plate.
- If bacteria of more than 10<sup>4</sup> cfu are inoculated in a plate, no independent colonies are formed and the entire plate may become colored.
- If the nature of specimen affects the result, the specimen should be inoculated only after the cause is eliminated by means such as dilution. For example: specimens having high viscosity, reactivity with chromogens, deep color, and too high or too low pH.

## Interpretation

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

### Precautions for interpretation

- The full plate size is 20 cm<sup>2</sup>. The plate's backside contains a 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.
- Though some bacteria other than *B. cereus* may also grow and form white colonies on this plate, only blue/pale blue colonies should be counted.
- 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 may also become blue/pale blue.