

# Compact Dry “Nissui” ETB

Simple and Easy Dry Media for Microbial Count

For *Enterobacteriaceae*:

## 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 smearing. To reduce the operate time and make it possible for anyone to perform the bacteria culture test without difficulty, Nissui has successfully developed a new device based on new concept and technology.

Compact Dry “Nissui” ETB is a simplified medium to determine number of *Enterobacteriaceae* by the combination of selective agents and pH indicator.

## 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 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: one year shelf life at room temperature.
- 5) Measurable after Incubation for 24 hours.
- 6) Red/red-purple colonies for *Enterobacteriaceae* are observed, and fishing of colonies is easy.
- 7) Good correlation with Pour Plate method: Maintain the continuity of data accumulated.

## Operating Procedure

### Preparation of specimen

- 1) Bacterial number in solid foodstuffs:  
Add buffering solution to the sample, and homogenize by Homogenizer. Drop 1ml of specimen (to be further diluted if necessary) in the middle of a dry sheet of Compact Dry.
- 2) Bacterial number in water or liquid foodstuffs:  
Drop 1ml of specimen (to be diluted if necessary) in the middle of a dry sheet.
- 3) Bacterial number in swab test specimen:  
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 Easy Wiping Kit “Nissui” (Code 06738) available as an optional kit.

### Direction

- 1) Open aluminum pouch, and take out a set of 4 plates.
- 2) Detach the quantity you need from a set of four by bending up and down while pressing the lid. Use a set of four plates being connected when a series of diluted samples is inoculated.
- 3) Take off the lid of the plate, and drop 1 ml of specimen in the middle of a dry sheet. Specimen diffuses automatically and evenly into all over the sheet (a medium size of 20 cm<sup>2</sup>) to transform it into gel.
- 4) Turn over the capped plate after putting the lid again, and then incubate for 24 ± 2 hours at 35 ± 2 °C.
- 5) Count red/red-purple colonies for *Enterobacteriaceae*. 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 of Compact Dry 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 300 cfu/plate.
- 5) If bacteria of more than 10<sup>4</sup> cfu are inoculated in a plate, no independent colonies are formed, and the whole medium gets stained.
- 6) If the nature of specimen does affect the result, the specimen should be inoculated only after the cause is eliminated by means of such as dilution and others. For example: specimens such as high viscosity, deep color, and too high or too low pH.

### Interpretation

*Enterobacteriaceae* forms Red/red-purple colonies of 1~2 mm in diameter by pH indicator contained in a medium.

### Precaution for interpretation

- 1) The plate size of ETB is 20 cm<sup>2</sup>, and the back of container has a carved grid of 1cm x 1cm to make colony counting easier. When it is difficult to count the colonies due to a great large number of colonies grown in the medium, the total bacterial number can be obtained by multiplying 20 by an average number of colonies per grid (1cm x 1cm) calculated from representative grids.
- 2) Though some bacteria other than *Enterobacteriaceae* may also grow and form white and/or yellow colonies in this plate, only Red/red-purple colonies should be counted.
- 3) It is known that certain *Enterobacteriaceae* may grow quickly and alkalize the medium. As a result, Red/red-purple color colonies get discolored and form yellow colonies. It is easy, however, to count once at early (ex. 18hours).
- 4) It is known that colonies of certain *Enterobacteriaceae* may be diffused. It is easy, however, to count dark point in center of each diffused colonies.

## 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, discolored or dehydrated, or its container is damaged.
- 4) After opening the aluminum pouch, any unused plates should be put back into the aluminum pouch to be sealed with tape to avoid light and moisture, and use up as soon as possible.

### 2. Precautions for danger

- 1) In case that media or reagents touched eyes or mouth, immediately wash with a plenty of water, and consult a physician.
- 2) Manipulations with microorganisms always 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 touched 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 or boiling water after use, and then disposed as industrial waste products according to the Law on Waste Disposal and Cleaning. Also follow to local laws and regulations relate to dispose.

### 4. Limitation of Warranties

If Compact Dry plate has proven to be defective due to Nissui’s negligence, Nissui Pharmaceutical or Nissui’s authorized distributor will replace or refund at the purchase price of the plate.

## Storage and Shelf life

### Storage

Keep at room temperature (1~30°C).

### Shelf life

One year after manufacturing.

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

## Package

Compact Dry “Nissui” ETB 40 plates	Code *****
Compact Dry “Nissui” ETB 240 plates	Code *****

## Related Products

Compact Dry “Nissui” TC 40 plates	Code 06740
Compact Dry “Nissui” TC 240 plates	Code 06741
Compact Dry “Nissui” EC 40 plates	Code 06742
Compact Dry “Nissui” EC 240 plates	Code 06743
Compact Dry “Nissui” CF 40 plates	Code 06744
Compact Dry “Nissui” CF 240 plates	Code 06745
Compact Dry “Nissui” YM 40 plates	Code 06746
Compact Dry “Nissui” YM 240 plates	Code 06747
Compact Dry “Nissui” VP 40 plates	Code 06748
Compact Dry “Nissui” VP 240 plates	Code 06749
Compact Dry “Nissui” SL 40 plates	Code 06732
Compact Dry “Nissui” SL 240 plates	Code 06733
Compact Dry “Nissui” X-SA 40 plates	Code 06729
Compact Dry “Nissui” X-SA 240 plates	Code 06730
Compact Dry “Nissui” X-BC 40 plates	Code 06727
Compact Dry “Nissui” X-BC 240 plates	Code 06728
Easy Wiping Kit “Nissui” 200 swabs	Code 06738

## Further information

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