Compact Dry "Nissui" LS

Simple and Easy Dry Media for Microbial Count

For *Listeria* species:

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" LS is a simplified medium to determine *Listeria* species 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 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) Light blue/blue colonies for *Listeria* species are observed, and fishing of colonies is easy.
7) Good correlation with Spreading 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.
4) For effective recover of *Listeria*, it is recommended that samples should be inoculated to Compact Dry after 1 hour of resuscitation step at 20℃ by Buffered Peptone Water (BPW) "Nissui" (Code 05131) as an optional kit.
   In case of solid foodstuffs, samples should be homogenized by BPW. In case of liquid samples and swab samples, they should be inoculated to small amount of BPW. This resuscitation step does not affect to the bacterial number. This resuscitation step is according to ISO 11290-2, horizontal method for the detection and enumeration of *Listeria monocytogenes*.

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^2) to transform it into gel.
4) Turn over the capped plate after putting the lid again, and then incubate for 24 $\pm$ 2 - 48 $\pm$ 3 hours at 35 or 37 $\pm$ 1 ℃.
5) Count light blue/blue colonies for *Listeria* species. 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 10^4 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

Listeria species forms light blue/blue colonies of 1-2 mm in diameter by chromgens contained in a medium.

Precaution for interpretation

1) The plate size of LS plate is 20 cm^2, 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) It is known that *Listeria ivanovii* tends to grow slowely and *Listeria seeligeri* tends to be inhibited in this plate.

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℃).

Shelf life

Eighteen (18) months after manufacturing.
Shelf life is printed on the labels of outer box, aluminum bag.

Package

Compact Dry "Nissui" LS 240 plates ····· Code 03908

Related Products

Easy Wiping Kit "Nissui" 200 swabs ····· Code 06738

Further information

Customer Support Section,
Nissui Pharmaceutical Co., Ltd.
3-23-9, Ueno, Taito-ku, Tokyo 110-8736 Japan
TEL: +81-3-5846-5707

Manufactured by
NISSUI PHARMACEUTICAL CO., LTD.
3-23-9, Ueno, Taito-ku, Tokyo 110-8736, Japan

(3E04)

Revised : June 2013