

Compact Dry “Nissui” SL

Simple and Easy Dry Medium for Microbial Detection
Compact Dry “Nissui” SL for *Salmonella* detection

Background:

The food poisoning outbreak caused by *Salmonella* is increasing in recent years, and the necessity of *Salmonella* control becomes important especially for food manufacturing process, and handling procedures. Especially for food manufacturers, it is important to detect and *Salmonella* rapidly and simply for the purpose of curtailment of product stock and confirming safety of the product.

Compact Dry “Nissui” SL is a simple dry culture medium that detects existence of *Salmonella* qualitatively based on its specific character, such as biochemical reactivity and motility.

Using pre-enrichment culture, a rapid screening for *Salmonella* is possible on the next day. A colony on Compact Dry “Nissui” SL can be fished for further tests to get confirmation result of *Salmonella*.

Features and Benefits:

- 1) Ready to use and portable plate: No need to prepare medium, which eliminates waste of medium as well as apparatus to prepare the medium.
- 2) Compact Dry “Nissui” SL can detect one day earlier than conventional culture method.
- 3) Detection of colonies on plate is simple and clear.
- 4) Isolated colonies on the plate can be fished for further identification tests.

Detection Principle:

Compact Dry “Nissui” SL is a dry medium for *Salmonella* detection, which contains chromogenic substrate and Novobiocin.

The presence of *Salmonella* in the sample is detected by the combination of different test principles, alkalization of the medium by *Salmonella*'s lysine decarboxylase ability (medium color will change blue-purple to yellow), greening colony caused by decomposition of chromogenic substrate with specific enzyme on *Salmonella* (black colonies are generated by hydrogen sulfide producing *Salmonella*) and motility of *Salmonella*.

Additionally, the colonies fished from Compact Dry “Nissui” SL can be used for confirmation of *Salmonella* after the inoculation of colonies onto the selective media. Coliform generate color change from blue-purple to red-purple by fermented lactose and/or sucrose in the medium.

Please follow this operating procedure precisely, especially how to inoculate sample and sterilized water, to utilize specific advantages of Compact Dry “Nissui” SL.

Operating Procedure:

Preparation of Apparatus and Materials

- 1) Prepared and sterilized medium made from Buffered Peptone Water (BPW) (Code 05131), EEM Broth (Code 05002)
- 2) Sterilized Homogenize Bag with filter (Code 01540)
- 3) Homogenizer (Code 01530)
- 4) Stand for Homogenize Bag
- 5) Sterilized Disposable Pipette (1mL) (Code 06472) or Sterilized Measuring Pipette
- 6) Sterilized Water
- 7) Incubator ($36 \pm 1^\circ\text{C}$ and $42 \pm 1^\circ\text{C}$)

Preparation of Specimen

1. Solid Foodstuffs:

Take 25g of solid specimen into the sterilized homogenized bag. Add 225mL of sterile Buffered Peptone Water or EEM Broth into the bag, and homogenize by stomacher for about one (1) minute.

2. Water or Liquid Foodstuffs:

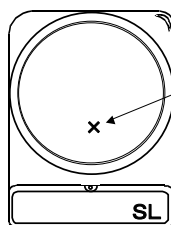
- 1) Add 9 times volume of Buffered Peptone Water or EEM Broth to liquid specimen.
- 2) Filter the liquid sample through membrane filter, and put the filter into BPW or EEM Broth.

3. Wiped sample:

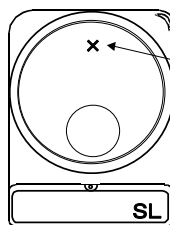
Add 9 times volume of Buffered Peptone Water or EEM Broth to the whole liquid made from wiped sample.

Direction

- 1) Prepared specimen shall be kept in the closed homogenized bag, and incubate the bag 20 - 24 hours at $35 - 37^\circ\text{C}$ in the Incubator as pre-enrichment culture.
- 2) Take the bag out from the incubator and rub the bag for homogenized. Use sterilized disposable pipette for sample inoculation. Drop 0.1mL (3 drops from the 1mL pipette) of enriched specimen on the dry sheet (approx. 1cm far from the edge of plate) gently. This enriched culture will stay at dropped point. Diffusion of this dropped specimen shall not reach to the edge of plate.



Drop 0.1mL of enriched specimen at approx. 1cm far from the edge of plate gently.



Drop 1mL of sterilized water at the opposite point where specimen dropped. Water shall diffuse automatically.

- 3) After the inoculation of the enriched culture, drop 1mL of sterilized water gently at the opposite point where the specimen dropped. Sterilized water will diffuse automatically and the sheet will be wet uniformly.
- 4) Turn over the plate capped, put in an incubator. And incubate 20 - 24 hours at $41 - 43^\circ\text{C}$.

Precaution for use

- 1) Please follow this operating procedure precisely for utilization of specific nature of *Salmonella*.
- 2) Be careful to avoid any contamination by falling microorganisms, or touching the medium during inoculation.
- 3) Keep cap tight of Compact Dry “Nissui” SL to avoid any possible dehydration during incubation.
- 4) It is recommended to use a homogenize bag with filter to eliminate risks of carry over of tiny pieces of foodstuffs into the medium.

Interpretation

Interpretation for Screening

<Salmonella Positive>

Black to green isolated or fused colonies are observed, and sheet around the colonies is changed to yellow. If a large quantity of *Salmonella* is inoculated on a plate, no isolated colonies are formed (there may be several spots with fused black or green colonies), but whole plate sheets become seemingly yellow.

<Salmonella Negative>

There is no color change occurred on the sheet. If it were occurred, the sheet color would be changed to red or reddish purple. No black or green colonies are observed.

Caution: The sheet color might be changed to yellow caused by *Pseudomonas* or *Proteus*. But yellow portion is small and limited because of their less motility.

Isolation of *Salmonella* from Compact Dry

- 1) It is available to use colonies on Compact Dry sheet for isolation/ identification tests. Pick up black to green colonies with loop, and smear and culture on MLCB agar for isolation of *Salmonella*.
- 2) After the isolation of single colony on the agar plate, continue and follow conventional identification/confirmation test procedure.

Precaution for Interpretation

- 1) Final report for *Salmonella* positive or negative result shall be followed by identification/confirmation test result.
- 2) When the picked up colonies, it is easy to isolate *Salmonella* from colonies away from the point where specimen inoculated, because of motility of *Salmonella*.
- 3) It is also possible to isolate *Salmonella* not from colonies but from yellowed portion.

Warning and Direction for Use

1. General precautions

- 1) Read and follow precisely the warning and direction for use described on this package insert and/or label.
- 2) Do not use the product after its expiry date. Quality of the product is not warranted after being expired.
- 3) Do not use the product that contains any foreign materials, discolored or dehydrated, or its container is damaged.
- 4) After opening the aluminum bag, any plates unused should be put back into the aluminum bag to be sealed with tape to avoid light and moisture, and use up as soon as possible.
- 5) Cap tightly again after inoculation to avoid dehydration of medium during incubation.

2. Precautions for danger

- 1) When if medium or reagent touched eyes or mouth, immediately wash with plenty of water, and consult a physician.
- 2) Manipulations with microorganisms involve always certain risks of laboratory-acquired infections. Manipulations should be practiced under the supervision of key 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 medium, reagent and materials must be sterilized by autoclaving or boiling water after use, and then dispose them as industrial waste 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 defective, 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: Eighteen(18) months after manufacturing.

Shelf life is printed on both label of outer box and the aluminum bag.

Package

Compact Dry “Nissui” SL	40 plates	.....	Code 06732
Compact Dry “Nissui” SL	240 plates	.....	Code 06733

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” 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

Customer Support Section, Nissui Pharmaceutical Co., Ltd.

3-23-9, Ueno, Taito-ku, Tokyo 110-8736 Japan
TEL: +81-3-5846-5707 / FAX: +81-3-5846-5629
E-mail: customer@nissui-pharm.co.jp

Manufactured by

NISSUI PHARMACEUTICAL CO., LTD.

3-23-9, Ueno, Taito-ku, Tokyo 110-8736 Japan

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