Compact Dry SL (for Salmonella)

40/240/880 plates Id No. 1002973/1002938/1002940

for *Salmonella* detection

Simple and Easy Dry Medium for Microbial 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 processes and handling procedures. Especially for food manufacturers it is important to detect *Salmonella* rapidly and simply for the purpose of controlling product stock and confirming safety of the product. Compact Dry 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 SL can be isolated for further confirmation tests.

Features and Benefits:

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

Detection Principle:

Compact Dry 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 of *Salmonella* (black colonies are generated by hydrogen sulfide producing *Salmonella*)
- Motility of *Salmonella*.

Additionally, the colonies isolated from Compact Dry SL can be used for confirmation of *Salmonella*.
Coliforms 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 exploit the specific advantages of Compact Dry SL.

Operating Procedure:

Preparation of Apparatus and Materials

1) Prepared and sterilized medium made from Buffered Peptone Water (BPW) or EEM Broth
2) Sterilized homogenize bag with filter
3) Homogenizer
4) Stand for homogenize bag
5) Sterilized disposable pipette (1mL) or sterilized measuring pipette
6) Sterilized water
7) Incubator (36±1°C and 42±1°C)

Preparation of Specimen

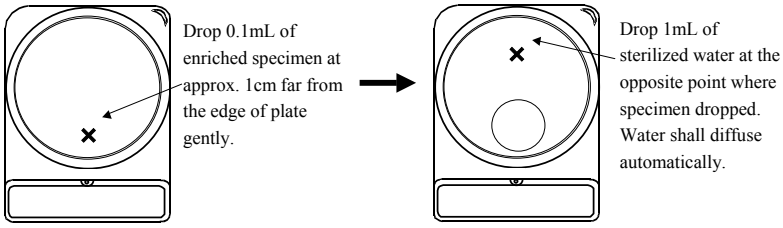
1) Solid Foodstuffs:
Take 25g of solid specimen into the sterilized homogenizer bag. Add 225mL of sterile Buffered Peptone Water or EEM Broth into the bag, and homogenize with stomacher for about one (1) minute.

2) Water or Liquid Foodstuffs:
Add 9 times volume of Buffered Peptone Water or EEM Broth to liquid specimen. Filtrate 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 samples.

Direction

1) Prepared specimen shall be kept in the closed homogenized bag, and incubate the bag 20 - 24 hours at 35 – 37°C in the incubator for pre-enrichment.
2) Take the bag out from the incubator and rub the bag for homogenization. Use sterilized disposable pipette for sample inoculation. Drop 0.1mL (3 drops from the 1mL pipette) of enriched specimen on the dry sheet (approx. 1 cm 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.



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 °C.

Precaution for use

1. Please follow this operating procedure precisely for detecting *Salmonella*.
2. Be careful to avoid any contamination by airborne microorganisms or touching the medium during inoculation.
3. Keep cap tight of Compact Dry SL to avoid any possible dehydration during incubation.
4. It is recommended to use a homogenizer 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 present, no isolated colonies are formed (there may be several spots with fused black or green colonies), but whole plate sheets becomes yellow.

<Salmonella Negative>

There is no color with the medium. If it occurres, the sheet color would change to red or reddish purple. No black or green colonies are observed.

Caution: The sheet color might change 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 SL:

1. It is possible to use colonies on Compact Dry sheet for isolation/ identification tests. Take black to green colonies with loop, and inoculate and culture on e.g. MLCB agar for isolation of *Salmonella*.

2. After the isolation of single colonies on the agar plate, continue and follow conventional identification/confirmation test procedure.

Precaution for Interpretation

Final report for *Salmonella* positive or negative result shall be followed by identification/confirmation tests.
While isolating colonies, it is possible to isolate *Salmonella* from colonies away from the point where specimen was inoculated, due to the motility of *Salmonella*.
It is also possible to isolate *Salmonella* from yellow portion.

Warning and Direction for Use

1 General precautions

Read and follow precisely the warning and direction for use described on this package insert and/or label.
Do not use the product after its expiry date. Quality of the product is not warranted after being expired.
Do not use the product that contains any foreign materials, discolored or dehydrated, or its container is damaged.
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.
Cap tightly again after inoculation to avoid dehydration of medium during incubation.

2 Precautions for danger

Immediately wash with plenty of water, and consult a physician. if medium or reagent touched eyes or mouth.
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.
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 following to local laws and regulations relate to dispose.

4 User Responsibility

It is 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 also 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.

Storage and Shelf life

Storage : Keep at room temperature (1 – 30 °C)
Shelf life: Minimum one year after manufacturing.
Shelf life is printed on both label of outer box and the aluminum bag.

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