

CompactDry™ VP

Simple and Easy Dry Medium for *Vibrio parahaemolyticus*

*Background

To save the time of operator and make it possible for anyone to perform the microbial count test without difficulty, Shimadzu Diagnostics Corporation has successfully developed CompactDry™ based on new concept and technology that may applicable for almost all food industries, which requires a simple and easy manipulation to add a drop of specimen on the device.

*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 needs to prepare medium, which eliminates the waste of medium as well as the apparatus to prepare the medium. Good for an emergency and a field test.
- 3) Sample diffuses automatically and evenly into the plate: No needs of mixing and dilution after sampling.
- 4) Dried plate and one and half year shelf life at room temperature: Easy to store. Once a liquid sample is dropped, the dry coated medium transforms to gel and the plate is ready to incubate.
- 5) Good correlation with Standard method: Maintain the continuity of data accumulated.

*Intended Use

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

*Operating Procedure

Preparation of specimen

- 1) Prepare appropriate diluent: Butterfield's buffered phosphate diluent (KH₂PO₄ at 0.0425g/L and adjust pH at 7.2, autoclave for sterilization) or Phosphate Buffered Saline (PBS) is recommended.
- 2) Viable count in solid foodstuffs
Weigh 50g solid sample and add 450mL Butterfield's buffered phosphate diluent or PBS to the sample. Homogenize this mixed sample by a blender. Pipette 1mL of homogenized specimen (to be further diluted if necessary) in the middle of dry sheet of CompactDry™ VP.
- 3) Viable count in water or liquid foodstuffs
Pipette 1mL of sample (to be diluted if necessary) in the middle of dry sheet of CompactDry™ VP.
- 4) Viable count in swab test sample
Inoculate 1mL of wiping solution (to be diluted if necessary), which is obtained from cotton swab, in the middle of dry sheet of CompactDry™ VP. It is recommended to use CompactDry Swab PBS (450002-PBS-0500) available as an optional kit.

*Direction for CompactDry™ VP

- 1) Open aluminum bag, and take out a set of 4 plates.
- 2) Detach 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.
- 3) Take off the cap of the plate, pipette 1 mL of sample in the middle of dry sheet, put the cap again. Specimen diffuses automatically and evenly into all over the sheet (total medium of 20 cm²) to transform it into gel within seconds.
- 4) Write the appropriate information on the memorandum section. Turn over the plate capped, put in an incubator.
Incubate 19 ± 1 hours for VP at 35 ± 1 °C.
- 5) From backside of the plate, count the number of colored colonies appeared in the medium. White paper placed under the plate can help to count colonies easier. When the number of colonies are great large, it is convenient to use the grids carved on the back of the container consisting of 1 cm x 1 cm, or 0.5 cm x 0.5 cm at the 4 corners.

Precaution for use

- 1) During inoculation, do not touch the surface of medium, and be careful to avoid any contamination by falling microorganism.
- 2) During incubation, keep cap tight of CompactDry™ 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) Detection limit of CompactDry™ VP is between 1 – 300 cfu/plate. Specimen should be diluted by buffer solution to the level of concentration of less than 300 cfu/plate.
- 5) If bacteria more than 10⁴ cfu were inoculated on a plate, no colonies are formed, and no colored colonies eventually appear on the plate but all plate sheets become seemingly colored.
- 6) If the nature of sample does affect the reaction of the medium, inoculate the sample only after the factor is eliminated by means of such as dilution and others.
For instance; samples such as high viscosity, colored, reacted with redox indicator, and too high or too low pH.

Interpretation

V. parahaemolyticus grow to develop blue/blue green colonies as the medium contains specific chromogenic enzyme substrate. *V. vulnificus*, *V. cholerae*, *V. mimicus* grow to develop pink-magenta colonies as the medium contains specific chromogenic enzyme substrate.

Precaution for interpretation

Full medium size in the plate is 20 cm², and the back of container has a grid carved of 1 cm x 1 cm to make colony counting easier. In case of any difficulty to count the colonies due to great large number of colonies grown on the medium, total viable count can be obtained by multiplying 20 by an average number of colonies per a grid (1 cm x 1 cm) counted from several grids. By the same reasoning, when if too many colonies grew on the medium to count, total viable count can be obtain by multiplying 80 by an average

number of colonies per a grid (0.5 cm x 0.5cm) that is carved in the four corners of the grids.

Some coliforms and enterococci may grow and form blue colonies. It is the user's responsibility in selecting any identification test methods to identify the colonies.

*Warning and Direction for Use

1. General precautions

- 1) Read and follow precisely the warning and direction for use described on the package insert and/or label.
- 2) Do not use the product after its expiry date. Quality of the product is not warranted after its shelf life.
- 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 gelled.

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 disposed as industrial waste according to the Law on Waste Disposal and Cleaning. Also follow to local laws and regulations related to dispose such material.

4. User Responsibility

- 1) 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.
- 2) 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.

5. Limitation of Warranties

CompactDry™ plates are manufactured at ISO 9001:2015 facility.

If any CompactDry™ plate is proven to defective by manufacture's or its authorized distributor's faults, they may replace or, at their opinion, 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.

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

Package

CompactDry™ VP 100 plates

Code HS8821

Further information

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