TM 928 – WESLEY BROTH BASE (as per APHA)

INTENDED USE

For isolation and enrichment of *Campylobacter jejuni* from poultry products.

PRODUCT SUMMARY AND EXPLANATION

Campylobacter jejuni is a gram-negative, rod-shaped curved bacterium commonly found in the intestines of poultry, cattle, swine, rodents, wild birds, cats and dogs. *C. jejuni* is recognized as a leading cause of acute bacterial gastroenteritis in humans due to eating the food of animal origin. *C. jejuni* is often isolated from patients with diarrhea at greater isolation rates than reported for *Salmonella* species. This organism does not grow below 30°C and is sensitive to normal atmospheric concentration of oxygen. Due to this reason, only small numbers of *Campylobacters* may be present in foods. Hence selective enrichment is needed to detect the few culturable cells of *C. jejuni* that may be present. *C. jejuni* survives best in foods held at refrigeration temperature but is highly susceptible to freezing conditions and also sensitive to sodium chloride. Wesley Broth is formulated as described by Wesley and recommended by APHA for selective enrichment of *C. jejuni* from poultry products.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	20.000
Yeast extract	2.500
Sodium chloride	5.000
Ferrous sulphate	0.250
Sodium metabisulphite	0.250
Sodium pyruvate	0.250
Bicine	10.000
Agar	1.000

PRINCIPLE

This medium is an ideal enrichment medium suitable for the isolation of *C. jejuni*. The medium consists of tryptose and yeast extract, which provide nitrogenous nutrients, vitamin B complex and other growth nutrients to the organisms. Sodium metabisulphite and ferrous sulphate help in survival and easy recovery of the organism. Sodium pyruvate increases the oxygen tolerance of *C. jejuni*.

Agar in small quantity helps to create microaerophilic atmosphere. Bicine gives good buffering capacity to the medium. Wesley Broth (90 or 100 ml) is inoculated with 10 or 25 grams of food respectively and incubated with agitation under a microaerobic atmosphere at 42°C for 16-18 hours. The enriched culture is plated onto selective media and the plates are incubated at 42°C for upto 48 hours under micro aerobic condition.

INSTRUCTION FOR USE

- Dissolve 39.25 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

- Cool to 50°C and aseptically add rehydrated contents of 1 vial of Campylobacter Selective Supplement and 6.25 ml of cooled alkaline hematin solution (Dissolve 32 mg of bovine hemin in 10 ml of 0.15 N NaOH).
- Sterilize by autoclaving at 5psi pressure (108°C) for 30 minutes.
- Mix well before dispensing.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Amber coloured clear to slightly opalescent solution.

INTERPRETATION

Cultural characteristics observed after incubation with added Campylobacter Selective Supplement and alkaline hematin solution, under micro aerobic atmosphere.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Campylobacter jejuni	29428	50-100	Good luxuriant	42°C	16-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

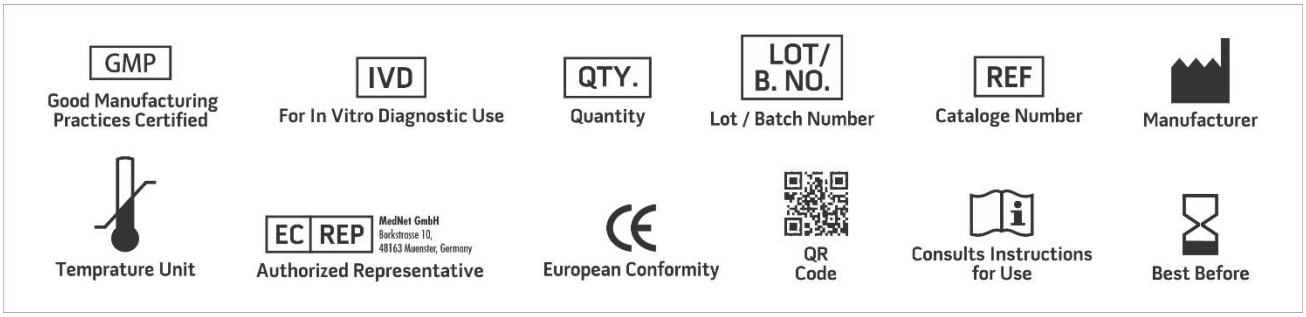
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Wesley R. D., Swaminathan B. and Stadelman W. J., 1983, Appl. Environ. Microbiol., 46:1097.
2. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
3. Christopher F. M., Smith G. C. and Vanderzant C., 1982, J. Food Prot., 45:260.
4. Gill C. O. and Harris L. M., 1984, J. Food Prot., 47:96.
5. George H. A., Hoffman P. S., Smibert R. M. and Krieg N. R., 1978, J. Clin. Microbiol., 8:36.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019