TM 1146 – BLOOD FREE CAMPYLOBACTER SELECTIVITY AGAR BASE (ISO 10272-1&2:2017)

INTENDED USE

For selective isolation and differentiation of *Campylobacter species.*

PRODUCT SUMMARY AND EXPLANATION

Campylobacters are carried in the intestinal tract of animal and therefore contaminate foods of animal origin. *Campylobacter* causes intestinal upset or abortion in animals. It is also one of the most important causes of human gastroenteritis, particularly in children. Initially blood was used in the isolation of *Campylobacter*. But, later it was reported by Bolton et al that charcoal can be effectively used in place of blood. This rules out the variability obtained due to the use of blood.

Blood Free Campylobacter Selectivity Agar Base formulated as per APHA and recommended by the ISO Committee is used for selective isolation of *Campylobacter* species. Cephalothin in the original formulation was replaced by Cefoperazone as the selective agent since the latter gave better selectivity. *Campylobacter* species are highly resistant to cefoperazone, an antibiotic which effectively suppresses growth of *Pseudomonas* and Enterobacteriaceae. Addition of cefoperazone increases the selectivity of the medium. Due to this addition, the medium is also known as Campylobacter Charcoal Differential Agar (CCDA). Charcoal, sodium pyruvate and ferrous sulphate reduces the aero-tolerance of medium by quenching photochemically generated toxic oxygen derivatives.

COMPOSITION

Ingredients	Gms / Ltr
Beef extract	10.000
Peptone	10.000
Tryptone	3.000
Sodium chloride	5.000
Sodium deoxycholate	1.000
Ferrous sulphate	0.250
Sodium pyruvate	0.250
Charcoal, bacteriological	4.000
Agar	12.000

PRINCIPLE

Peptone, tryptone and beef extract serve as sources of carbon, nitrogen, amino acids, vitamins and other essential nutrients. Casein is added to help grow certain strains of nalidixic acid resistant thermophilic Campylobacter that are environmental organisms.

INSTRUCTION FOR USE

- Dissolve 22.75 grams in 500 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Campylobacter Supplement V.
- Alternatively, to increase the selectivity of the medium, rehydrated content of one vial of CAT Selective Supplement may be added to 500 ml sterile molten base.

- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Grey to black homogeneous free flowing powder.
Appearance of prepared medium : Black coloured, opaque gel forms in Petri plates.
pH (at 25°C) : 7.4±0.2

INTERPRETATION

Cultural characteristics observed after incubation with added Campylobacter Supplement V.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Campylobacter coli	33559	50-100	Good-luxuriant	>=50%	Creamy-grey	42°C	24-48 Hours
Campylobacter jejuni	29428	50-100	Good-luxuriant	>=50%	Grey	42°C	24-48 Hours
Escherichia coli	25922	50-100	Inhibited	0%	-	42°C	24-48 Hours
Campylobacter laridis	35222	50-100	Good-luxuriant	>=50%	Varying type	42°C	24-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

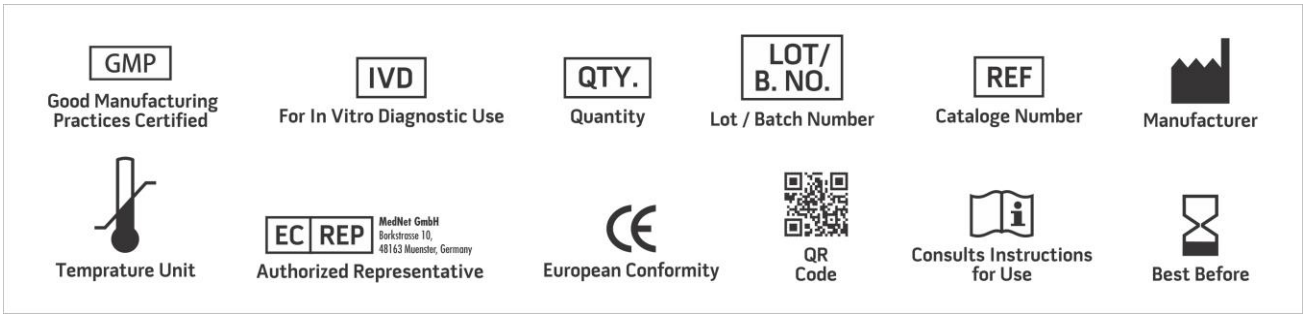
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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. Ahonkai V. I., et al, 1981, Antimicrob. Agents. Chemother.,20:850.
2. Atlas R. M., 2004, Handbook of Microbiological Media, 3rd Ed, CRC Press.
3. Bolton F. J., Hutchinson D. N and Coates D., 1984, J. Clin. Microbiol., 19:169.
4. Hutchinson D. N and Bolton F.J., 1984, J. Clin. Pathol., 34:956.
5. Jones R. N., et al, 1980, Antimicrob. Agents. Chemother.,17:743.
6. Karmali M. A., et al, 1986, J. Clin. Microbiol., 23:456.
7. Salfinger Y., and Tortorello M.L. , 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.



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

***For Lab Use Only**

Revision: 08 Nov., 2019