

CM 20853 - KARMALI CAMPYLOBACTER AGAR BASE

INTENDED USE

For selective isolation and cultivation of thermotolerant Campylobacter species from food and animal feeds.

PRODUCT SUMMARY AND EXPLANATION

Campylobacter are carried in the intestinal tract of animals and therefore, contaminate foods of animal's origin. Campylobacter jejuni is recognized as a leading cause of acute bacterial gastroenteritis in humans, and eating foods of animal origin has been associated with many of these illnesses. Campylobacter jejuni and Campylobacter coli are the most common Campylobacter species associated with diarrheal illness and are clinically indistinguishable. Karmali Campylobacter Agar Base, recommended for the selective isolation and cultivation of Campylobacter species, is a modification of the original formulation of Karmali et al. Selectivity of the medium is achieved by the addition of selective supplement. Campylobacter Selective Supplement with Hemin (Karmali) or Campylobacter Selective Supplement with Hemin (Karmali), Modified has hemin, as part of the supplement whereas, while using Campylobacter Selective Supplement, Karmali or Campylobacter Selective Supplement (Karmali), Modified, hemin has to be added separately. Karmali Campylobacter Agar Base is also recommended by the ISO Committee.

COMPOSITION

Ingredients	Gms / Ltr
Peptone, special	23.000
Corn starch	1.000
Sodium chloride	5.000
Charcoal	4.000
Agar	12.000

PRINCIPLE

Peptone special, cornstarch and hemin, serve as sources of essential nutrients required for bacterial metabolism. Presence of charcoal in the medium helps to neutralize the toxic metabolic products formed in the medium. Sodium pyruvate (present in Supplement) enhances, the aerotolerance of microaerophilic Campylobacter by quenching the toxic forms of oxygen. The antibiotics included in the selective supplement are Vancomycin, Amphotericin B, Cycloheximide and Cefoperazone. Vancomycin suppresses gram-positive organisms while Amphotericin B/ Cycloheximide inhibits the fungal flora. Cefoperazone has inhibitory action on gram-negative organisms other than Campylobacter. The inoculated plates are incubated in an atmosphere consisting of approximately 5-6% O₂, 10% CO₂ and 84-85% N₂ at 42°C.

INSTRUCTION FOR USE

Dissolve 22.5 grams in 490 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. Aseptically add rehydrated contents of 1 vial of Campylobacter Selective Supplement w/ Hemin (Karmali) or Campylobacter Selective Supplement w/ Hemin (Karmali), Modified.

Alternatively, add aseptically rehydrated contents of one vial of Campylobacter Selective Supplement, Karmali or Campylobacter Selective Supplement (Karmali), Modified and 5 ml of Hemin solution (16 mg/5 ml).

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, opalescent gel forms in Petri plates.
pH (at 25°C) : 7.4±0.2

INTERPRETATION

Cultural characteristics observed with added Hemin solution and Campylobacter Selective Supplement (Karmali), Modified/Campylobacter Selective Supplement, Karmali or Campylobacter Selective Supplement w/ Hemin (Karmali), Modified / Campylobacter Selective Supplement w/Hemin(Karmali) after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Campylobacter coli	33559	50-100	Good-luxuriant	≥50%	42°C	42-48 Hours
Campylobacter jejuni	29428	50-100	Good-luxuriant	≥50%	42°C	42-48 Hours
Escherichia coli	25922	50-100	None-poor	0-10%	42°C	42-48 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

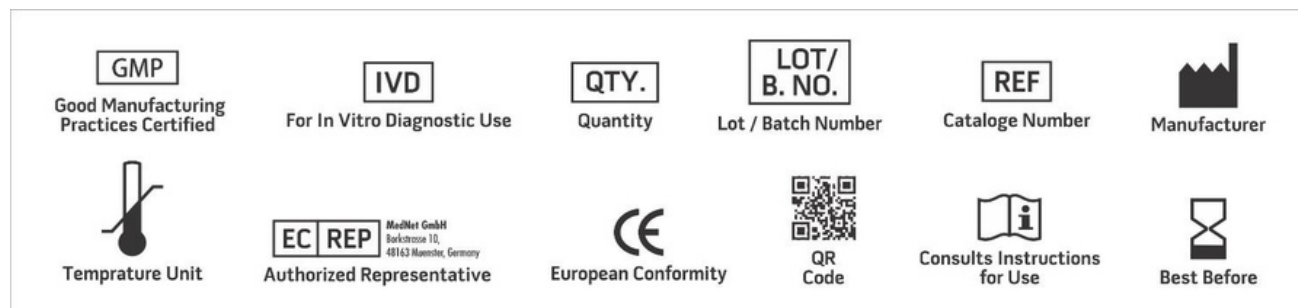
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. George H. A., Hoffman P. S. and Krieg N. R., 1978, J. Clin. Microbiol., 8:3
3. Hoffman P. S. et al, 1979, Can. J. Microbiol., 25:
4. International Organization for Standardization (ISO), 1995, Draft ISO/DIS 1027
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
7. Karmali M. A., Simor A. E., Roscoe M., Fleming P. C., Smith S. S. and Lane J., 1986, J. Clin. Microbiol., 23:456-459.
8. Murray P. R., Baron E. H., Pfaller M. A., Tenover F. C. and Tenover R. H., (Ed.), 1995, Manual of Clinical Microbiology, 6th Ed., American Society for Microbiology, Washington, D.C.



9. 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.
10. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.



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

*For LabUse Only

