HiCrome™ Campylobacter Agar Base

M2020

Intended Use:

Recommended for selective isolation and presumptive identification of *Campylobacter species* from food and clinical samples.

Composition**

Ingredients	Gms / Litre
Peptone mix	25.000
Sodium chloride	5.000
Chromogenic mix	10.250
Growth factor	4.280
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 29.77 grams in 500 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Campylobacter Selective Supplement (Karmali) (FD078). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Campylobacter species are ubiquitous in the environment inhabiting a wide variety of ecological niches (4). Infection with a *Campylobacter* species is one of the most common causes of human bacterial gastroenteritis (4). Most species are found in animals (cattle, swine) and cause infertility and abortion (1). *Campylobacter jejuni* and *Campylobacter coli* both lead to severe diarrhea when ingested (7).

ISO 10272-1:2006 (3), as well as the U.S. Food and Drug Administration BAM(9)recommend the use of modified charcoal cefoperazone deoxycholate agar (mCCDA)(6) as a primary selective medium for detection of *Campylobacter* species. But colourless colonies of *Campylobacter* are often difficult to detect on black colored medium. Therefore a chromogenic medium based on conventional mCCDA, was developed for the detection of *Campylobacter* species.

HiCrome™ Campylobacter Agar Base is well supplemented to support luxuriant growth of *Campylobacter* species. Osmotic equilibrium of the medium is maintained by sodium chloride. Peptone mix provides carbonaceous, nitrogenous compounds, long chain amino acids, vitamins and other essential growth factors. Sucrose is the fermentable carbohydrate. The antibiotic supplement Campylobacter selective supplement, Karmali, Modified (FD178) reduce the growth of normal enteric bacteria while enhancing the growth and recovery of *C. jejuni* from faecal specimens. *Campylobacter* species appear mauve to purple coloured colonies.

Type of specimen

Clinical specimens- faeces; food.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (8,10).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Incubation of *Campylobacter jejuni* should be carried out at 42°C as it is thermophilic organism. Higher temperature imparts selectivity by inhibiting accompanying microflora and promotes growth of *Campylobacter jejuni* .

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Yellow coloured clear to slightly opalescent gel in Petri plates.

Reaction
Reaction of 5.95% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
Cultural characteristics observed under microaerobic atmosphere with added Campylobacter Selective Supplement, Karmali, Modified (FD178), after an incubation at 35-37°C for 24-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli ATCC 25922 (00013*)	50-100	none-poor	<=10%	
Campylobacter jejuni ATCC 33291	50-100	good-luxuriant	>=50%	Mauve to purple
Campylobacter coli ATCC 33559	50-100	good-luxuriant	>=50%	Mauve to purple
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	none-poor	<=10%	

* Corresponding WDCM numbers

Storage and Shelf Life

Store between 15-25°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1. Bolton, F.J., D. N. Hutchinson, and D. Coates.1984, Blood-free selective medium for isolation of *Campylobacter jejuni* from faeces.J.Clin.Microbiol.19:169-171.
2. Humphrey, T.,S.O'Brien, and M.Madsen.2007.Campylobacters as zoonotic pathogens: a food production perspective. Int. j. Food Microbiol. 117:237-257.
3. International Organization for Standardization. 2006. ISO 10272-1, Microbiology of food and animal feeding stuffs-horizontal method for detection and enumeration of *Campylobacter* spp. -Part 1; Detection method. ISO, Geneva.

4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

5. 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.

6. Koneman E. W, Allen S. D., Janda W. M, Schreckenberger P. C., Winn W. C. Jr, 1992, Colour Atlas and Textbook of Clinical Microbiology, 4th Edition, J. B. Lippincott Company.

7. Manning H., Duim B., Wassenaar T., Wagenaar A., Ridley A., Newell D.G., 2001, Appl. Environ. Microbiol., 67:1185

8. 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.

9. U.S. Food and Drug Administration. 2015, Bacteriological analytical manual online. Available at: http://www.fda.gov/Food/ Food ScienceResearch/LaboratoryMethods/ucm2006949.htm. Accessed 1 March 2015.

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.

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IVD	In vitro diagnostic medical device
CE	CE Marking
25°C 15°C	Storage temperature
	Do not use if package is damaged
	HiMedia Laboratories Pvt. Limited, 23 Vadhani Industrial Estate, LBS Marg,Mumbai-86,MS,India
EC REP	CE Partner 4U ,Esdoornlaan 13, 3951 DB Maarn The Netherlands, www.cepartner 4u.eu