Campylobacter Cefex Agar Base

M1267

Intended Use:

Recommended for isolation and cultivation of *Campylobacter* species.

Composition**

Ingredients	g / L
Tryptone	15.000
Peptone	10.000
Sodium chloride	5.000
Yeast extract	2.000
Dextrose (Glucose)	1.000
Ferrous sulphate	0.500
Sodium pyruvate	0.500
Sodium bisulphite	0.350
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 49.35 grams in 950 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. Aseptically add 10% defibrinated sheep blood or 5-7% v/v laked horse blood and rehydrated contents of one vial of Park and Sanders Selective Supplement II, (FD105). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Campylobacter species were associated with variety of veterinary diseases and also has been characterized as bacterial agents of human foodborne gastroenteritis. The organisms may also be transmitted by contaminated food or water. Campylobacter Cefex Agar Base is used for isolation and cultivation of *Campylobacter* species (1). Campylobacter Agar with antimicrobics and 50 ml sheep blood is recommended as a selective medium for the primary isolation and cultivation of *Campylobacter species.* Campylobacter Cefex Agar Base is a highly nutritious base and the addition of horse blood supplements the medium with X-factor and other growth factor requirements. Tryptone, Peptone and yeast extract provide nitrogenous compounds, carbon, sulphur, vitamins and trace ingredients. Glucose is utilized as an energy source. Sheep blood supplies the X-factor (heme) and other growth requirements. Incorporation of antibiotics (FD105) suppresses the growth of the normal microbial flora in the specimens thereby facilitating isolation of *Campylobacter* species.The addition of antimicrobials to the medium is required to suppress the growth of normal flora. Cefoperazone is added to inhibit many gram-positive and gram-negative organisms (Aerobic and anaerobic). Cycloheximide is added to inhibit the growth of contaminating fungi. Campylobacter Cefex Agar Base can be used for direct inoculation or indirect inoculation. After inoculation, incubate the plates at 42°C for 48-72 hours in microaerophilic atmosphere. In addition, media may be set up in duplicate with the second set incubated at 35-37°C to allow for the growth of certain *Campylobacter* species. *Campylobacter jejuni* colony morphology may appear as small mucoid, grayish flat colonies with irregular edges and no hemolytic patterns after 24-48 hours. Colonies may also appear pink or yellowish gray with some colonies exhibiting a tailing effect along the streak line (2). They may also appear as round, convex, entire, glistening, 1-2 mm in diameter.

Cephalothin-sensitive *Campylobacter* species such as *C.fetus* and *C.upsaliensis* may not be recovered on Campylobacter Cefex Agar Base because it contains cefoperazone (3). These agents in selective media may inhibit some strains of desired species. Therefore, specimens cultured on selective media should also be cultured on non-selective media to obtain additional information and to ensure recovery of potential pathogens.

Type of specimen

Clinical samples - faeces; Food and dairy samples; Water samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7,8).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(9)
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. 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.Some agents in selective media may inhibit some strains of desired species.
2.Furthermore, specimens cultured on selective media should also be cultured on non-selective media to obtain additional information and to fortify recovery of potential pathogens.

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

Basal medium : Yellow coloured clear to slightly opalescent gel. After addition of blood: Cherry red coloured opaque gel forms in Petri plates

Reaction

Reaction of 4.94% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed under microaerobic atmosphere with added 10%v/v defibrinated sheep blood or 5-7%v/v laked horse blood and Park and Sanders Selective Supplement II, (FD105), after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Campylobacter jejuni ATCC 29428 (00156*)	50-100	good-luxuriant	>=50%
Escherichia coli ATCC 25922 (00013*)	50-100	none-poor	<=10%
Enterococcus faecalis ATCC 29212(00087*)	50-100	none-poor	<=10%

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°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

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3.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
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.
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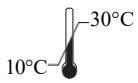
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP

CEpartner4U, Esdoornlaan 13,
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CE **CE Marking**

Do not use if package is damaged

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