Doyle's Enrichment Broth Base

M916

Intended Use:

Recommended for selective enrichment of *Campylobacter* species.

Composition**

Ingredients	g / L
Tryptone	10.000
Peptone	10.000
Yeast extract	2.000
Dextrose (Glucose)	1.000
Sodium chloride	5.000
Sodium bisulphite	0.100
Sodium succinate	3.000
L-Cysteine hydrochloride	0.100
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15.6 grams in 460 ml purified/distilled water. Heat if necessary 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 35 ml sterile lysed horse blood and rehydrated contents of one vial of Doyle's Selective Supplement (FD043). Mix well and dispense into sterile tubes or flasks as desired.

Principle And Interpretation

Campylobacter have long been known as pathogens of animal but two species i.e. *Campylobacter jejuni* and *Campylobacter coli* are now among the commonest identified cause of enteritis in man. It was due to the former lack of selective culture medium for their isolation from faeces that their role as human pathogens was not recognized (1).

Doyles Enrichment Broth Base is recommended by APHA (2) for enrichment of *Campylobacter* species. Dekeyser et al (3) reported the isolation of *Campylobacter jejuni* from the faeces of patients with diarrhoea and acute gastroenteritis using a filtration technique and a selective medium with antimicrobics to suppress the normal enteric flora. Skirrow (4) reported a selective medium containing three antimicrobics. Blaser et al (5) reported success in isolating *Campylobacter jejuni* with a medium containing four antimicrobics added to Brucella Agar supplemented with defibrinated sheep blood. Peptone, Tryptone, yeast extract, and blood provide the nitrogenous compounds, vitamin B, X factor (heme) and other growth factors for the growth of *Campylobacter* species. Dextrose serves as a source of energy. Inclusion of antibiotics like vancomycin, trimethoprim, polymyxin B and cycloheximide suppresses the growth of the normal microbial flora in faecal specimens, thereby facilitating easy isolation of *Campylobacter* species.

Inoculate 10 to 25 grams of the test food sample in 100 ml Doyles Enrichment Broth Base. After incubation at 35-37°C for 18-24 hours under reduced oxygen atmosphere, isolate onto a suitable selective medium.

Type of specimen

Clinical samples - Faeces; Food and dairy samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (6,7).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (2,8,9).

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. Further biochemical and serological tests must be carried out for complete identification.

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

Colour and Clarity of prepared medium

Basal medium :Light amber coloured clear solution. After addition of sterile lysed horse blood : Cherry red coloured, opaque solution in tubes

Reaction

Reaction of 3.12% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed under reduced oxygen atmosphere, with added sterile lysed horse blood and Doyle's Selective Supplement (FD043) after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
Candida albicans ATCC 10231 (00054*)	50-100	none-poor
Campylobacter jejuni ATCC29428 (00156*)	50-100	good - luxuriant
Escherichia coli ATCC 25922 (00013*)	50-100	none-poor
Enterococcus faecalis ATCC 29212 (00087*)	50-100	none-poor

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 (6,7).

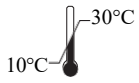
Reference

1. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone
2. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C
3. D. C. Dekeyser, et al, 1972, J. Infect. Dis., 125:390.
4. Skirrow, 1977, Br. Med. J., 2:9.
5. Blaser, Cravens, Powers and Wang, 1978, Lancet, 2:979.
6. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
7. 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.
8. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
9. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

Revision : 05/2024

HiMedia Laboratories Pvt. Limited,
Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India

IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.