CFC Broth Base

M1957

Intended Use:

Recommended for selective isolation of *Pseudomonas* species.

Composition**

Ingredients	Gms / Litre
# Gelatin peptone	16.000
## Tryptone	10.000
Potassium sulphate	10.000
Magnesium chloride	1.400
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters
#- Equivalent to Enzymatic digest of gelatin
##- Equivalent to Enzymatic digest of casein

Directions

Suspend 37.4 grams in 1000 ml purified / distilled water. Heat if necessary 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 sterile rehydrated contents of two vials of Modified CFC Selective Supplement (FD281). Mix well and dispense as desired.

Principle And Interpretation

CFC Broth Base is prepared according to ISO (5) which contains magnesium chloride and potassium sulphate to enhance pigment production. The medium base is supplemented with CFC Supplement for the isolation and enumeration of *Pseudomonas* spp. from meat products, after incubation at 25ºC for 48 hours.

Goto and Enomoto (1) formulated CetriNix supplement for the selective isolation of *Pseudomonas aeruginosa* from clinical specimens. Lowbury and Collins (4) studied cetrimide as a selective agent. CetriNix supplement suppresses *Klebsiella*, *Proteus* and *Providencia* species.

Modified CFC Selective Supplement was formulated as per the recommendations of ISO (5) for selective isolation of *Pseudomonas* species. It contains cephalothin, sodium fusidate and cetrimide to improve the selective action. This combination of supplement gave more specific medium to isolate *Pseudomonas* species from chilled foods and processing plants.

Type of specimen

Food samples - Meat and meat products.

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (6).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

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 specimens. Safety guidelines may be referred in individual safety data sheets

Limitations

1. Some species may show poor growth due to nutritional variations.

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 in tubes

Reaction
Reaction of 3.74% w/v aqueous solution at 25°C. pH : 7.2±0.2

Cultural Response
Cultural characteristics observed with added Modified CFC Selective Supplement (FD281),after an incubation at 25°C for 48 hours.

Organism	Growth	Inoculum (CFU)
Pseudomonas aeruginosa ATCC 27853 (00025*)	luxuriant	50-100
Pseudomonas aeruginosa ATCC 9027 (00026)*	luxuriant	50-100
Escherichia coli ATCC 25922 (00013*)	inhibited	>=10^4
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	inhibited	>=10^4

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 (2,3).

Reference

1. Goto S. and Entomoto S., 1970, Jap. J. Microbiol., 14:65.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
3. 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.
4. Lowbury E.J. and Collins A.G., 1955, Clin. Path., 8:47.
5. Meat and meat products. Enumeration of presumptive *Pseudomonas spp.*, BS EN ISO 13720:2010
6. 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.

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