Lin's Cupric Sulfate Medium

M2027

Recommended as a differential medium for the detection of wild yeasts.

Composition**

Ingredients	Gms / Litre
Peptone	2.000
Yeast extract	4.000
Malt extract	2.000
Dextrose(Glucose)	10.000
Dipotassium hydrogen phosphate	1.100
Ammonium chloride	0.500
Copper sulphate	0.550
Agar	20.000
Final pH (at 25°C)	5.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.15 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Lin's Cupric Sulfate Medium is used for the detection of wild yeast. This medium suppressed the growth of culture yeasts and support that of most non-Saccharomyces wild yeasts (1).

Peptone, malt extract and yeast extract provides carbon, nitrogen compounds, long chain amino acids, vitamins, trace elements and other necessary nutrients to support the growth of yeasts. Dextrose (Glucose) is the suitable carbohydrate for the growth of yeasts. Dipotassium hydrogen phosphate and Copper sulphate suppresses culture yeasts.

Type of specimen

Isolated Microorganism

Specimen Collection and Handling:

For isolated microorganism samples follow appropriate techniques for handling specimens as per established guidelines (2,3). 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 strains of culture yeasts may show slight growth hence distinct colonies are considered as wild yeast.

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

Light yellow to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Yellow coloured slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 4.02% aqueous solution at 25°C. pH : 5.30±0.2

pH

5.10-5.50

Cultural Response

Cultural characteristics observed after an incubation at 30°C for 3 days.

Organism	Inoculum (CFU)	Growth	Recovery
Candida albicans ATCC 10231 (00054*)	50-100	luxuriant	>=50%
Candida kruisei ATCC 24408	50-100	luxuriant	>=50%
Saccharomyces cerevisiae ATCC 9763 (00058*)	50-100	None-poor	0-10%

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

References

1.J.E. Siebel son's company, Enzyme products division, Miles Laboratories, Inc.

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.

Revision : 02/2023