Reference: 0920 Technical Data Sheet

## Specification

Culture medium for the isolation and identification of Candida sp.

## Presentation

20 Prepared Plates
90 mm
with: $21 \pm 2 \mathrm{ml}$

## Packaging Details

1 box with 2 packs of 10 plates/pack. Single cellophane..

Shelf Life
3 months
Storage
$2-14^{\circ} \mathrm{C}$

## Composition

Composition ( $\mathrm{g} / \mathrm{l}$ ):

Yeast extract.......................................... 1.00
Dextrose................................................. 10.00
Glycine................................................... 10.00
Sodium sulfite..........................................3.00
Ammonium Bismuth Citrate......................5.00
Agar...................................................... 15.00

Note: A decrease in pH is normal and does not affect performance.

## Description/Technique

Nickerson Agar (BIGGY) is suitable for the isolation and identification of Candida species. The medium is made according to the general principles of Bismuth-Sulfite Agar. An inhibitory and differential medium using a high concentration of glycine for selectivity. This medium is highly inhibitory, and does not allow bacterial growth, however most Candida spp. grow freely and rapidly.
Occasionally, tiny colonies of bacteria or highly repressed moulds may appear.
The appearance of the colonies in this medium after an incubation of $48-72$ hours at $28-30^{\circ} \mathrm{C}$ is as follows:

- Candida albicans: Creamy colonies, very convex, circular with very slight mycelial border and black or dark brown in colour. It has no metallic sheen or diffused pigment, even after 72 hours of incubation.
- Candida tropicalis: Acuminated colonies, creamy, irregular and with slight mycelial borders. Dark brown with black centre. After 72 hours of incubation the colonies may take on a metallic sheen and produce a diffused zone of pigment.
- Candida krusei: Big and plain colonies, with irregular borders. Brown colour, darker in the centre. A yellow halo appears around the colony.
- Candida parakrusei: Plain colonies, average size, irregular. Dark red centre and light red borders, but when the border is mycelial it looks yellow.
- Candida pseudotropicalis: Big and plain colonies, dark red colour with mycelial border.
- Candida stellatoidea: Average size plain colonies, dark brown colour, without mycelial development.
- Rhodotorula: Creamy convex colonies, with irregular border and colours ranging from pink to orange.
- Moulds in general: Restricted colonial growth and cottony appearance.

Note: A decrease in pH is normal and does not affect performance.

## Quality control

Physical/Chemical control
Color: Off-white
$\mathrm{pH}: 6.8 \pm 0.2$ at $25^{\circ} \mathrm{C}$

## Microbiological control

Spiral Spreading: Practical range $100 \pm 20$ CFU; Min. 50 CFU (Productivity) / $10^{4}-10^{6} \mathrm{CFU}$ (Selectivity).
Aerobiosis. Incubation at $28 \pm 2^{\circ} \mathrm{C}$ during 24-72h.

## Microorganism

Candida albicans ATCC ${ }^{\circledR}$ 10231, WDCM 00054
Candida tropicalis ATCC ${ }^{\circledR} 1369$
Escherichia coli ATCC ${ }^{\circledR}$ 25922, WDCM 00013

## Sterility Control

Incubation 48 hours at $30-35^{\circ} \mathrm{C}$ and 48 hours at $20-25^{\circ} \mathrm{C}$ : NO GROWTH
Check at 7 days after incubation in same conditions

## Growth

Good. Dark brown colonies.
Good. Dark brown colonies.
Inhibition (Partial to complet)

## Bibliography

- ATLAS, R.M. \& L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press. BocaRaton. Fla. USA.
- FORBES, B.A., D.F. SAHM \& A.S. WEISSFELD (1998) Bailey \& Scott's Diagnostic Microbiology. Mosby. St Louis. MO. USA.
- ISENBERG, H.D. (1995) Clinical Microbiology Procedures Handbook. ASM Press. Washington. DC. USA.
- MacFADDIN, J.D. (1985) Media for isolation-cultivation-identification-maintenance of medical bacteria. William \& Wilkins.

Baltimore. MD. USA.

- MURRAY, P.R., E.J. BARON, J.H. JORGENSEN, M.A. PFALLER \& R.H. YOLKEN (Eds) (2003) Manual of Clinical Microbiology. $8^{\text {th }}$ ed. ASM Press. Washington. DC. USA.
- NICKERSON (1953) Reduction of Inorganic substance by yeast I. Extracellular reduction of sulfite by species of Candida J. Inf. Dis 93:43.

