Mucormycosis Selective Agar Plate

MP5476

Intended Use

Recommended for isolation of Mucor fungi species (after sporulation appears as black fungi) from clinical samples.

Composition**

Ingredients	g/ L
HiVeg™ peptone	10.000
Maltose	20.000
Malt extract	10.000
Potato infusion	10.000
Muco Selective Supplement (FD823)	**1 vial**
Selective mixture	259 mg
Agar	15.000
pH after sterilization(at 25°C)	5.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

Mucormycosis (previously called zygomycosis) is a serious but rare fungal infection caused by a group of molds called mucormycetes (1). In most cases it is due to an invasion of the genera *Rhizopus* and *Mucor*, common bread molds (2). It is also refered to as black fungus. People suffering from COVID-19, HIV/AIDS and other viral diseases, congenital bone marrow disease, severe burns, cancers and untreated or irregularly treated diabetes have reduced immunity and are prone to developing mucormycosis.When Mucor attacks the sinuses, it spreads to the lungs, the brain and the central nervous system. Common symptoms of the resulting mucormycosis include fever, headache, reddish and swollen skin near the nose or eyes, facial pain, cough producing bloody or dark fluids, and shortness of breath.

This medium is specifically designed to promote rapid and selective growth of Mucor strains. HiVeg™ peptone, Malt extract and potato infusion serves as a source of nitrogeneous and carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients. Maltose in the medium serves as a rich source of carbon & energy. Selective mixture suppresses the growth of yeast, and inhibits contaminating bacterial flora.

Some mucoromyces group of fungi may produce infective spores, which are easily dispersed in air, so examination should be carried out in safety cabinet. The medium is provided in lockable plates to ensure user safety.

Type of specimen

Clinical samples : eye lesion, nasal swabs, other sites of infection

Specimen Collection and Handling

Specimens from the eye, nose, nasopharynx and other sites of infection are usually collected with the help of sterile swab and transported to the lab by using HiFungal Tranport medium w/swab (MS5478) which contains the transport medium along with the swab. Specimen collection shouuld be carried out by trained personnel. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precaution

In Vitro Diagnostic use only. Read the label before opening the pack. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling clinical specimens and culture. Standard guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual fungi differ in their growth requirement and therefore show variable growth patterns on the medium
2. Further biochemical and serological tests need to be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile Mucormycosis Selective Agar in 90 mm disposable plates with smooth surface and absence of black particles/cracks/ bubbles

Colour of medium

Light yellow to amber coloured medium

Quantity of medium

25 ml of medium in 90 mm disposable plates.

pH

5.40-5.80

Sterility Check

Passes release criteria

Growth Promotion Test

Cultural characteristics observed after an incubation at 25-30 °C for 24-48 hours. Over incubation should be avoided.

Cultural Response

Organism	Growth	Sporulation
Mucor racemosus ATCC 42647	Luxuriant	black spores observed
Rhizopus oryzae MTCC 1987	Luxuriant	black spores observed
#*Aspergillus brasiliensis* ATCC 16404 (00053*)	none-poor	-
Candida albicans ATCC 10231 (00054*)	inhibited	-
Trichophyton rubrum ATCC 28191	none-poor	-
Escherichia coli ATCC 25922 (00013*)	inhibited	-
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	inhibited	-
Pseudomonas aeruginosa ATCC 27853 (00087*)	inhibited	-

Key : (#) - Formerly known as *Aspergillus niger,* (*) - corresponding WDCM numbers

Storage and Shelf Life

On receipt store between 20-30°C Use before expiry date on the label. 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 (3,4).

Reference

1. "Mucormycosis". NORD (National Organization for Rare Disorders). Archived from the original on May 26, 2021. Retrieved May 25, 2021
2. Lee, Soo Chan; Idmurm, Alexander (2018). "8. Fungal sex: The Mucoromycota". In Heitman, Joseph; Howlett, Barbara J.; Crous, Pedro W.; Stukenbrock, Eva H.; James, Timothy Yong; Gow, Neil A. R. (eds.). The Fungal Kingdom. Wiley. pp. 177–192. ISBN 978-1-55581-958-3. pp. 177–192. ISBN 978-1-55581-958-3.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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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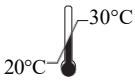

Storage temperature

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

CE Marking

Do not use if package is damaged

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