

DUAL PLATE DERMATOFITI (DTM AGAR/SABOURAUD DEXTROSE AGAR)

 For in vitro diagnostic use **IVD**

Bi-plate for detection and cultivation of fungi from clinical and veterinary specimens.

DESCRIPTION

DUAL PLATE DERMATOFITI (DTM AGAR/SABOURAUD DEXTROSE AGAR) is a ready-to-use plate containing two distinct media used for the isolation and differentiation of yeasts and moulds. DTM Agar allows the selective growth of pathogenic dermatophytic fungi. Sabouraud Dextrose Agar (SDA) is a non selective isolation medium supporting the growth and maintenance of pathogenic and non-pathogenic fungi. Its formula conforms to EN ISO 11133 and meets the criteria of the Harmonized Pharmacopoeia.

PRINCIPLE

Sabouraud Dextrose Agar is a peptone medium supplemented with dextrose to support the growth of fungi. The peptones are sources of nitrogenous growth factors. Dextrose provides an energy source for the growth of microorganisms. In DTM Agar peptones supply nitrogen and are the source of alkaline products, produced by dermatophytes. When peptones are metabolized to alkaline products, a change of the phenol red indicator from yellow to red will take place. Glucose is added as a nutrient and to allow acidification by fungi able to primarily use glucose. Most fungi other than dermatophytes, including yeasts and molds (if they are able to grow on the medium), will utilize glucose. This results in acid formation and no color change of phenol red which is the pH indicator. Cycloheximide is an inhibitor for molds and non-pathogenic yeasts. Gentamicin and tetracyclin are antibacterial inhibitors. A few organisms, including saprophytes, yeasts, and bacteria, are capable of growing on the medium and changing the color from red to yellow, but they are easily recognized by their distinctive colonial morphology.

DTM Agar

| COMPOSITION | g/L |
|----------------------------------|------|
| Enzymatic Digest of Soybean Meal | 10.0 |
| Dextrose | 10.0 |
| Phenol red | 0.2 |
| Cycloheximide | 0.5 |
| Gentamicin | 0.1 |
| Cloramphenicol | 0.1 |
| Agar | 15.0 |

Final pH 5,6 ± 0,2 at 25°C

Sabouraud Dextrose Agar

| COMPOSITION | g/L |
|--------------------------------|------|
| Pancreatic Digest of Casein | 5.0 |
| Peptic Digest of Animal Tissue | 5.0 |
| Dextrose | 40.0 |
| Agar | 15.0 |

Final pH 5,6 ± 0,2 at 25°C

WARNING AND PRECAUTIONS

For in vitro diagnostic use.

Observe the precautions normally taken when handling laboratory reagents.

Prepared Medium: The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous.

Safety Data Sheet is available on request for professional users.

All waste must be disposed of according to local directives.

STORAGE AND STABILITY

Prepared medium: 10-25°C

The product is stable until the expiration date indicated on the label under the recommended storage conditions.

PREPARATION

Prepared medium (plates): ready to use.

PROCEDURE

Inoculate plates by streaking directly the sample onto the agar surface. Streak the specimen as soon as possible after it is received in the laboratory. Incubate aerobically at room temperature (15-30°C) for up to 7 days.

RESULTS

Examine daily and observe for development of a red color change in the DTM medium. Pathogenic dermatophytes (Epidermophyton, Microsporum, and Trichophyton spp) typically produce alkaline metabolites and most of them will produce a color change in 3-6 days.

Growth, without a color change to red, indicates that the organism is probably not a dermatophyte. Further biochemical and/or serological testing is recommended for complete identification.

If growth appears on Sabouraud Dextrose Agar used as control medium and no growth appears on DTM, the organism is not a dermatophyte. Colonies with green or black hyphae are not typical of dermatophytes even though the media may turn red.

QUALITY CONTROL

DTM Agar: clear, yellowish-orange.

Sabouraud Dextrose Agar: slightly opalescent, light amber.

DTM AGAR → Typical response after incubation at 25±2°C for 2-7 days:

| MICROORGANISM | GROWTH |
|--|-------------------------------------|
| Trichophyton mentagrophytes ATCC® 9533 | Good, red medium |
| Candida albicans ATCC® 10231 | Good, no color change in the medium |
| Aspergillus brasiliensis ATCC® 16404 | Inhibited |
| Staphylococcus aureus ATCC® 25923 | Inhibited |
| Escherichia coli ATCC® 25922 | Inhibited |

SABOURAUD DEXTROSE AGAR → Typical response after incubation at 25±2°C for 2-7 days:

| MICROORGANISM | GROWTH |
|--|-----------------------------------|
| Trichophyton mentagrophytes ATCC® 9533 | Good |
| Candida albicans ATCC® 10231 | Good |
| Aspergillus brasiliensis ATCC® 16404 | Good |
| Staphylococcus aureus ATCC® 25923 | Partially to completely inhibited |
| Escherichia coli ATCC® 25922 | Partially to completely inhibited |

REFERENCES

- EN ISO 11133:2020. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
- European Pharmacopoeia 6.5 (2009) 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms.
- United States Pharmacopoeia 32 NF 27 (2009) Microbiological examination of non-sterile products: Test for specified microorganisms.
- Japanese Pharmacopoeia 4.05 (2008) Microbiological examination of non-sterile products: Test for specified microorganisms.
- Larone (1995) Medically important fungi: a guide to identification, 3rd ed. American Society for Microbiology, Washington, D.C.
- MacFaddin, J.D. (1985) Media for isolation-cultivation-identification-identification-maintenance of medical bacteria, p. 695-699, vol. 1. Williams & Wilkins, Baltimore, MD.
- Taplin D., N. Zaias, N. Rebell and H. Blank (1969) Isolation and recognition of dermatophytes on a new medium (DTM). Arch Dermatol. 99:203.
- Sabouraud (1892) Ann. Dermatol. Syphil. 3:1061.

PRESENTATION

Packaging
REF.
DUAL PLATE DERMATOFITI (DTM Agar/Sabouraud Dextrose Agar)
20 pcs (90mm ready-to-use plates) 3400607/20

SYMBOLS

Read the instructions

Biological hazard

CE Mark (product complies with the requirements of Regulation (EU) 746/2017)

Temperature limitation

Use by

For in vitro diagnostic use

Manufacturer