Yeast Malt Agar (YM Agar) (ISP Medium No. 2)

M424

Intended Use:

For the isolation and cultivation of yeasts, moulds and other aciduric microorganisms.

Composition**

Ingredients	g / L
Peptone	5.000
Yeast extract	3.000
Malt extract	3.000
Dextrose (Glucose)	10.000
Agar	20.000
Final pH (at 25°C)	6.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 20.5 grams in 490 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For preparing selective media acidify the media up to pH 3.0 to 4.0 by aseptically adding 1 vial of 10% Lactic Acid Solution (FD095). **DO NOT HEAT** the media after addition of acid. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Yeast Malt Agar is formulated as per Wickerham (1,2) for isolation and cultivation of yeasts, moulds and other aciduric microorganisms. Fungistatic materials such as sodium propionate and diphenyl are added to YM Agar to eliminate moulds and thus permits enumeration of yeasts from mixed population. YM Agar is also recommended by APHA (3). Wickerham suggested the use of Yeast Malt Broth (M425) as an enrichment medium for yeasts by adding a layer of sterile paraffin oil (about 1 cm) on the surface of inoculated broth. After the growth occurs it should be streaked on YM Agar to obtain isolated colonies of fermentative species. To isolate fermentative as well as oxidative strains, acidified YM Broth (M425) is placed on a rotary shaker for 1 or 2 days which favors development of yeast cells while the sporulation of moulds is prevented and yeasts can be isolated by streaking on YM Agar.

Peptone serves as a source of carbon, nitrogen, long chain amino acids and other essential nutrients. Yeast extract supplies vitamin B complex nutrients and other growth factors. Malt extract serves as an additional source of carbon. Dextrose is the carbohydrate and energy source. To increase the selectivity, the media can be acidified by the addition of sterile10% Lactic Acid or by addition of 10% HCl, tartaric acid or 10% citric acid. Alternatively antibiotics (penicillin 20U/ml or streptomycin to a final concentration of 40mcg/ml) can be added. Acidified agar medium should not be reheated.

Type of specimen

Clinical samples - Skin scrapings; Food and dairy samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,6). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

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 beige homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 4.1% w/v aqueous solution at 25°C. pH : 6.2±0.2

pH

6.00-6.40

Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 40-72 hours.

Organism	Inoculum (CFU)	Growth at pH 3.4	Recovery at pH 3.4	Growth at pH 6.2	Recovery
# *Aspergillus brasiliensis* ATCC 16404 (00053*)	50-100	good-luxuriant	>=50%	good-luxuriant	>=50%
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant	>=50%	good-luxuriant	>=50%
Escherichia coli ATCC 25922 (00013*)	50-100	inhibited	0%	good-luxuriant	>=50%
Lactobacillus casei ATCC 9595	50-100	poor	20-30%	good-luxuriant	>=50%
Lactobacillus leichmannii ATCC 4797	50-100	poor	20-30%	good-luxuriant	>=50%
Saccharomyces cerevisiae ATCC 9763 (00055*)	50-100	good-luxuriant	>=50%	good-luxuriant	>=50%

Key: (#) Formerly known as *Aspergillus niger*, (*) 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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1. Wickerham L. J., 1951, U.S. Dept. Agric. Tech. Bull. No.1029.
2. Wickerham L. J., 1939, J. Tropical Med. Hyg., 42:176.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. 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.
6. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.

Revision : 06/2024

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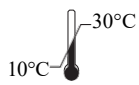
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
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www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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