Czapek Yeast Extract Agar

M1335

Intended Use:

Recommended for the cultivation and maintenance of *Aspergillus niger*.

Composition**

Ingredients	Gms / Litre
Sucrose	30.000
Yeast extract	5.000
Dipotassium hydrogen phosphate	1.000
Sodium nitrate	0.300
Potassium chloride	0.050
Magnesium sulphate	0.050
Ferrous sulphate	0.001
Zinc sulphate	0.001
Copper sulphate	0.0005
Agar	15.000

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 51.40 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Aspergillus belongs to the group Ascomycota, members of which are generally referred as Ascomycetes. *Aspergillus brasiliensis* is one of the most common species of the genus Aspergillus and ubiquitously present in soil. Aspergillus brasiliensis is cultured for the industrial production of many substances. Various strains of *Aspergillus brasiliensis* are used in the industrial preparation of citric acid and gluconic acid. These substances have been assessed as acceptable for daily intake by the World Health Organisation. Many enzymes are also produced using *Aspergillus brasiliensis*. These include glucoamylase and a-galactosidase, and other medications which claim to prevent flatulence. Another use of *Aspergillus brasiliensis* in the biotechnology industry is in the production of magnetic isotope-containing variants of biological macromolecules for NMR analysis.

Czapek Yeast Extract Agar is recommended for the cultivation and maintenance of Aspergillus brasiliensis (1). This medium supports the abundant growth of almost all saprophytic Aspergilli (2). Sucrose serves as the source of energy. Yeast extract provides essential amino acids, vitamins and other essential nutrients. Sodium nitrate serves as the nitrogen sources. The various salts buffer the medium in addition to supplying essential ions to the growing fungi.

Type of specimen

Pure isolates

Specimen Collection and Handling:

For pure isolate 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. 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 yellow homogeneous free flowing powder

Gelling

Firm,comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured, clear to slightly opalescent gel with a slight precipitate forms in Petri plates.

Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 48-72 hours

Organism	Growth
#*Aspergillus brasiliensis* *ATCC 16404* (00053*)	luxuriant

Key : * - Corresponding WDCM numbers.
- Formerly known as *Aspergillus niger*

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).

Reference

1. Atlas R. M., 2004, Handbook of Microbiological Media 3rd Edition, CRC Press.

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.

4. Thom and Raper, 1945, Manual of Aspergilli, 39.

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