

TECHNICAL DATA SHEET

Czapek Yeast Extract Agar

Principle

Czapek yeast extract Agar is used for maintenance of *Aspergillus*; it's abundantly present in the environment or soil, and it's used in industrial applications. Media consists of sucrose, yeast extract, dipotassium hydrogen phosphate, sodium nitrate, potassium chloride, magnesium sulfate, ferrous sulfate, zinc sulfate, copper sulfate and agar. Sucrose serves as the source of carbon, while yeast extract is a source of nitrogenous compounds, vitamin B complexes, and other growth nutrients. Dipotassium phosphate buffers the medium. Sodium nitrate serves as a source of nitrogen. Magnesium sulfate, ferrous sulfate, zinc sulfate and copper sulfate serve as sources of essential ions. Agar is a solidifying agent.

Use: For the cultivation and maintenance of *Aspergillus niger*.

Contents*

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

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 51.40 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45°C and distribute aseptically. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

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ISO 9001-2008 Certified Company

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber colored, slightly opalescent gel with precipitate
Growth Promotion properties	Best at ≤ 100 CFU at 22-25 °C for 24-72 h
Indicative properties	Optimum at ≤ 100 CFU at 22-25 °C for 24-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at $25 \pm 2^\circ\text{C}$ for 48-72 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth
<i>Aspergillus brasiliensis</i>	16404	Luxuriant
<i>Candida albicans</i>	10231	Luxuriant

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Dox, A. W. (1910). *The intracellular enzymes of Penicillium and Aspergillus with special references to those of P. camemberti*. U.S. Dept. Agr. Bur. Anim. Ind. Bull. 120:70.
4. Isenberg, H.D. *Clinical Microbiology Procedures Handbook* 2nd Edition
5. Thom and Raper, *A Manual of the Aspergilli*, Williams & Wilkins Co., Baltimore, MD.

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