Czapek Dox Agar

Intended Use
Czapek Dox Agar is a semisynthetic medium used for general cultivation of fungi, yeasts and soil bacteria.

Summary
Fungi, including yeasts and filamentous species or moulds are ubiquitously distributed in nature. Czapek Dox Agar is a semisynthetic medium used for the cultivation of fungi, containing sodium nitrite as the sole source of nitrogen. This medium is prepared according to the formula developed by Thom and Church 1926, which has a defined chemical composition. Czapek Dox Agar is recommended by APHA for isolation of *Aspergillus*, *Penicillium*, *Paecilomyces* and some other fungi with similar physiological requirements.

Principle
Sucrose serves as the sole source of carbon while sodium nitrite serves as the sole source of nitrogen. Dipotassium phosphate buffers the medium. Magnesium sulphate, potassium chloride, ferrous sulphate serves as sources of essential ions.

Formula*

Ingredients	**g/L**
Sucrose	30.0
Sodium Nitrite	2.0
Dipotassium Phosphate	1.0
Magnesium Sulphate	0.5
Potassium Chloride	0.5
Ferrous Sulphate	0.01
Agar	15.0
Final pH (at 25°C)	7.3 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Water samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 49.01 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Boil with frequent agitation to dissolve the powder completely. DO NOT OVERHEAT.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control

Dehydrated Appearance: Light yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Light yellow to amber coloured, slightly opalescent gel forms in petridishes.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 20°C-25°C for 5-7 days for fungi.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 20°C-25°C.

Organism (ATCC)	**Growth**
Aspergillus brasiliensis WLRI 034(120) (16404)	Good
Candida albicans 3147 (10231)	Good
Saccharomyces cerevisiae NRRL Y-567 (9763)	Good

Note: For good growth - Growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.
Growth for *Aspergillus brasiliensis* is observed after 72 hours at 20°C-25°C for quantitative test and the same is carried out for qualitative test and confirmed characteristic growth (White mycelial growth with black spores) after 4-5 days.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Limitations

This medium is general purpose medium and may not support the growth of fastidious organisms.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Thom and Church, 1926. The Aspergilli, 39.
2. Eaton A. D., Clesceri L. S., Greenberg A. E., (Ed.), 1998, Standard Methods for the Examination of Water and Waste water, 20th Ed., American Public Health Association. Washington, D.C.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	**Product description**	**Pack Size**
201030210100	Dehydrated Culture Media	100 g
201030210500	Dehydrated Culture Media	500 g