Czapek Dox Broth

Intended Use
Czapek Dox Broth 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 Broth is a semisynthetic medium used for the cultivation of fungi, containing sodium nitrate as the sole source of nitrogen. This medium is prepared according to the formula developed by Thom and Church, which has a defined chemical composition. Czapek Dox Broth is the modification of the original medium of Czapek and Dox as per Thomas and Raper.

Principle
Sucrose serves as the sole source of carbon while sodium nitrate 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 Nitrate	3.0
Dipotassium Phosphate	1.0
Magnesium Sulphate	0.5
Potassium Chloride	0.5
Ferrous Sulphate	0.01
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 35.01 g of the powder in 1000 mL purified / distilled water.
2. Heat if necessary, to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Mix well and dispense as desired.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogeneous, coarse free flowing powder.
Prepared Appearance: Colourless, clear to very slightly opalescent solution, may have a slight precipitate in tubes.
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 3-5 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 (16404)	Good
Candida albicans (10231)	Good
Saccharomyces cerevisiae (9763)	Good

Note: Inoculum for good growth is 10 - 100 cfu.

Growth for Aspergillus brasiliensis is observed after 48 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 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. Czapek, 1920-1903, Bcitr. Chem. Physiol. Pathol., 1:540
3. Dox, 1910, U.S. Dept. of Agr. Bur. Anim. Ind. Bull., 120:70
4. Thom and Raper, 1945, Manual of Aspergilli, 39.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	**Product description**	**Pack Size**
201030220100	Dehydrated Culture Media	100 g