



# PRODUCT SPECIFICATION SHEET

## Czapek Dox Agar (DM069)

### Intended Use

Czapek Dox Agar (DM069) is a semisynthetic medium for cultivation of fungi.

### Product Summary and Explanation

Fungi, including yeasts and filamentous species or moulds are ubiquitously distributed in nature. Czapek-Dox Agar is used to grow bacteria and fungi which are capable of utilizing sodium nitrate as a sole source of nitrogen. This medium is prepared according to the formula developed by Thom and Church, <sup>(1)</sup> having a defined chemical composition, which has been modified by the substitution of magnesium glycerophosphate for magnesium sulfate and potassium phosphate in the original formula <sup>(2, 3)</sup> as per Thomas and Raper. <sup>(4)</sup> Czapek-Dox media are useful in a variety of microbiological procedures, including soil microbiology and fungi and mildew resistance tests. Thom and Raper reported Czapek-Dox Broth and Czapek Dox Agar produce moderately vigorous growth of most saprophytic aspergilla and yield characteristic mycelia and conidia. <sup>(4)</sup> Czapek Dox Agar is recommended in *Standard Methods for the Examination of Water and Wastewater* for the isolation of *Aspergillus*, *Penicillium*, *Paecilomyces* and related fungi. <sup>(5)</sup>

### Principles of the Procedure

Sucrose serves as the sole source of carbon and sodium nitrate serves as the sole source of nitrogen. Dipotassium phosphate buffers the medium. Magnesium sulphate and ferrous sulfate are sources of cations, and potassium chloride contains essential ions.

### Formula / Liter

Ingredients	Gms / Liter
Sucrose	30.00
Sodium nitrate	2.00
Dipotassium phosphate	1.00
Magnesium sulphate	0.50
Potassium chloride	0.50
Ferrous sulphate	0.01
Agar	15.00
Final pH: 7.3 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

### Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

### Directions

1. Suspend 49.01 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile petri plates.

### Quality Control Specifications

Dehydrated Appearance	Cream to yellow colored, homogeneous, free flowing powder
Prepared Medium	Light yellow coloured, clear to slightly opalescent gel with slight precipitate forms in petri plates
Reaction of 4.9% Solution	pH : 7.3 ± 0.2 at 25°C



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<b>Gel Strength</b>	Firm, comparable with 1.5% Agar gel
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**Expected Cultural Response:** Cultural characteristics observed after an incubation at 25-30°C for 48-72 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	good-luxuriant	>=50%
2.	<i>Candida albicans</i> ATCC 10231	50 -100	good-luxuriant	>=50%
3.	<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	good-luxuriant	>=50%

The organisms listed are the minimum that should be used for quality control testing.



*Aspergillus brasiliensis* ATCC 16404



*Candida albicans* ATCC 10231

### Test Procedure

Refer to appropriate references for specific procedures for the cultivation of fungi and bacteria capable of utilizing inorganic nitrogen.

### Results

Refer to appropriate references and procedures for results.

### Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

### Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

### Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.



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2. Consult appropriate texts for detailed information and recommended procedures.

### Packaging

Product Name : Czapek Dox Agar.

Product Code : DM069

Available Pack sizes : 100gm / 500gm

### References

1. Thom and Church, 1926, The Aspergilli, 39.
2. Czapek, 1920-1903, Beitr. 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. Eaton, Rice and Baird (ed.). 2005. Standard methods for the examination of water and wastewater, 21st ed., online. American Public Health Association, Washington, D.C.

### Further Information

For further information please contact your local MICROMASTER Representative.



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DM069PSS,QAD/FR/024,Rev.00/01.01.2018

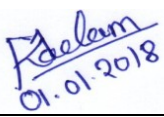


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