

70185 Czapek Dox Agar

A semi-synthetic solid medium, containing sucrose as C-source and nitrate as the sole source of nitrogen, useful for the general cultivation of fungi, yeasts and soil bacteria. Recommended by Czapek (1902-1903) and Dox (1910).

Composition:

Ingredients	Grams/Litre
Sucrose	30.0
Sodium nitrate	3.0
Potassium chloride	0.5
Magnesium sulfate Heptahydrate	0.5
Iron(II) sulfate Heptahydrate	0.01
di-Potassium hydrogen phosphate	1.0
Agar	15.0
Final pH 7.3 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Suspend 50 g in 1 litre of distilled water. Bring to the boil in order to dissolve completely, sterilize by autoclaving at 121°C for 15 minutes. Mix well before pouring.

Principle and Interpretation:

This medium has a defined chemical composition. It is a semisynthetic medium containing sodium nitrate as the sole source of nitrogen. It is one of the most widely used medium for the general cultivation of fungi. But the only bacteria which are able to develop are the non-fastidious soil-bacteria. This medium can be also used for chlamyospore production by *Candida albicans*. It has good buffering action due to the presence of different salts. The pH is slightly above neutral value. Czapek Dox Agar supports abundant growth of almost all saprophytic *Aspergilli* with characteristic mycelia and conidia formation.

According to Raper and Fenell (1965), addition of 1 % corn-steep liquor promotes the growth and sporulation of most *Aspergillus* species. The addition of 5 g yeast extract per litre and a pH value of 4.0 is recommended for the isolation of soil fungi. The accompanying bacterial flora can also be inhibited by adding 30 mg streptomycin per litre and 2 mg aureomycin per litre.

Cultural characteristics after 24-48 hours at 35°C.

Organisms (ATCC)	Growth
<i>Aspergillus brasiliensis</i> (16404)	+++
<i>Saccharomyces cerevisiae</i> (9763)	+++
<i>Candida albicans</i> (10231)	++
<i>Bacillus subtilis</i> (6633)	++
<i>Staphylococcus aureus</i> (25923)	-



References:

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Precautions and Disclaimer

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