Specification

Solid semisynthetic medium for the cultivation of fungi, with nitrate as a sole nitrogen source.

Formula * in g/L

Sucrose	30,00
Sodium nitrate	2,00
Magnesium glycerophosphate	0,50
Potassium sulfate	0,35
Potassium chloride	0,50
Ferrous sulfate	0,01
Agar	15,00

Final pH 6,8 ±0,2 at 25 ºC

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Suspend 48.5 g of powder in one liter of distilled water and heat until boiling. Distribute into containers and sterilize by autoclaving for 15 minutes at 121 ° C. If a lower pH is required, acidify the medium, once sterilized; add sterile lactic acid after cooling to 45 ° C.

Description

Czapek-Dox medium is a chemically defined general culture medium, in which the only source of nitrogen is nitrate and carbon is solely obtained from sucrose. It has been used very effectively in the isolation and cultivation of soil microorganisms.

In its original form it has a pH close to neutral, but can be selective for fungi by adding, after sterilization and prior to solidification, 10 mL of sterile 10%, lactic acid solution whereupon the pH drops to 3.5.

Warcup, for the isolation of soil fungi, added 5 g / L of Yeast Extract (Art. 07-079) and a mixture of antibiotics (streptomycin 30 mg / L and tetracycline 2 mg / L) to achieve total efficacy. In any case, the growth of bacteria is always relatively poor.

Technique

Czapek-Dox medium was adopted for use in morphological studies of soil fungi, as it promotes the formation of chlamydospores by Candida albicans over short time periods (Dawson 1962).

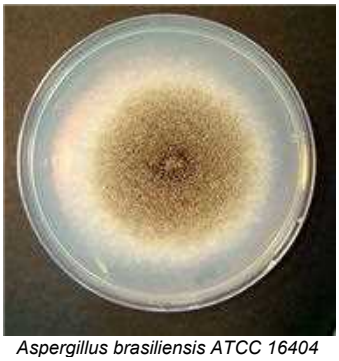
The incubation temperatures and times are varied and can range from 1to 5 weeks at room temperature. However normally 8-15 days at 15 ° C, for common microorganisms in the soil is recommended. For Candida, 48 hours at 28-30 ° C; for Penicillium 22-25 °C and on the other hand Aspergillus grows best at 30-32 °C.

Quality control

Incubation temperature: 23 ºC / 30ºC **Incubation time:** 48h / ≤ 7dyas

Inoculum: 10^{3}-10^{4} CFU (Productivity test qualitative), or touch the center of plate for filamentous fungi.

Microorganism	Growth	Remarks
Aspergillus brasiliensis ATCC® 16404	Good	30 ºC±1
Penicillium aurantiogriseum ATCC® 16025	Good	23 ºC±1
Candida albicans ATCC® 10231	Poor to Good	30 ºC±1



Aspergillus brasiliensis ATCC 16404

References

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· RAPER, K.B. & D.J.FENELL (1965). The genus Aspergillus. William & Wilkins Co. Baltimore.
· WARCUP, J.H. (1950) The soli-plate method for isolation of fungi from soil. Natur 166:117-118.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).