



Reference : 02-633

Scharlau Microbiology - Technical data sheet

Product :
m-GREEN BROTH

Also known as

m-Green yeast & Mould Broth

Specification

Liquid selective culture medium used for the enumeration of fungi according to ISO standard.

Formula * in g/L

Dextrose.....	50.000
Peptone.....	10.000
Yeast extract.....	9.000
Magnesium sulfate.....	2.100
Potassium phosphate.....	2.000
Diastase.....	0.050
Thiamine.....	0.050
Bromocresol green.....	0.026

Final pH 4,6 ± 0,2 at 25 °C

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

Directions

Dissolve 73,22 g of powder in 1 L of distilled water, heating if necessary. Distribute it into suitable containers and sterilize in the autoclave at 121°C for 15 minutes.

Description

m-Green Broth is a classical formulation used in the food industry for the detection and enumeration of yeast and moulds by the membrane filtration method and was adopted by ISO in its 10718:2002 Standard for application in cork stoppers for alcoholic beverages.

The composition of the culture broth includes Bromocresol Green indicator which facilitates the visualization and counting of fungal colonies. The fungal colonies are green due to the diffusion of the dye into the colonies (alkaline reaction). The end products of the microbial growth diffuse into the medium, reducing the pH and turning the indicator to yellow (acid reaction). Bacterial growth is inhibited by the acidic pH.

Technique

Saturate the blotting pad for the membrane filter in a sterile Petri dish with 2.0 to 2.5 mL of m-Green Broth. Roll the membrane filter used for filtering the test sample onto the surface of the moistened pad. Avoid formation of air bubbles. Incubate the plates at 30 ± 2°C for 3 days. Observe and count the colonies on each filter at least every 24 hours.

After incubation, the colonies that appear on the surface of the filter can be counted. Mould colonies generally appear green and filamentous, whereas yeast colonies are green and opaque.



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Quality control

Incubation temperature: 28-32°C

Incubation time: 24-48-72 h

Inoculum: Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity) / 10⁴-10⁶ CFU (Selectivity) according to ISO 11133:2014/Amd 1:2018 . MF methods. with pad.

Microorganism

Bacillus subtilis ATCC® 6633

Aspergillus niger ATCC® 16404

Saccharomyces cerevisiae ATCC® 9763

Candida tropicalis ATCC® 1369

Candida albicans ATCC® 10231

Growth

Inhibited to poor

Good

Good

Good

Good

Remarks

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Black sporulation at 5 days

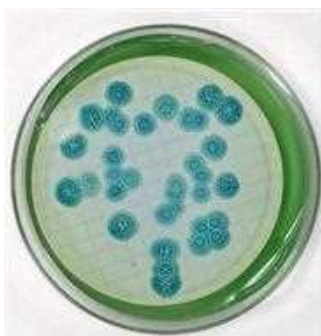
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Saccharomyces cerevisiae ATCC 9763



Candida albicans ATCC 10231



Aspergillus niger ATCC 16404

References

- ATLAS, R.M. & L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press. London.
- ISO Standard 10718:2002 Cork stoppers. Enumeration of colony-forming units of yeasts, moulds and bacteria capable of growth in an alcoholic medium.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.

Storage

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