

Technical Information

Emerson Agar

Product Code: DM1325

Application: - Emerson Agar is used for isolation and cultivation of *Actinomycetaceae*, *Streptomycetaceae*, fungi and moulds.

Composition**

Ingredients	Gms / Litre
Beef extract	4.000
Yeast extract	1.000
Peptic digest of animal tissue	4.000
Dextrose	10.000
Sodium chloride	2.500
Agar	20.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Emerson Agar which was originally formulated by Emerson et al⁽¹⁾ and used for the cultivation of moulds and bacterial species resembling moulds⁽³⁾ was further modified by Gottlieb et al⁽²⁾ for screening potent antibiotic-producing organisms⁽⁴⁾. In their study, they stored *Streptomyces* in soil for long time and transferred them to slants of Emerson Agar as and when needed. The slant cultures were incubated for 3-7 days. The spores were gently scraped from the cultures surface to form a spore inoculum.

Yeast extract provides a source of trace elements, vitamins and amino acids. For the selective isolation of *Streptomyces* species, cycloheximide is incorporated in the medium, which limits the growth of moulds. This medium is also used for routine cultivation and maintenance of pure cultures.

Methodology

Suspend 41.5 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Add 0.05 grams / litre cycloheximide, if desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Light amber coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.15% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH range 6.80-7.20

Cultural Response/ characteristic

DM 1325 Cultural characteristic observed when sub cultured on Emerson Agar at 22-25⁰ C for 2-5 days.



Dehydrated Culture Media
Bases / Media Supplements

Organism

**Aspergillus brasiliensis* ATCC 16404

Saccharomyces cerevisiae ATCC 9763

Streptomyces albus subsp. albus ATCC 3004

Streptomyces lavendulae ATCC 8664

Streptomyces achromogenes ATCC 12767

*Key: Formerly known as *Aspergillus niger* ATCC 16404

Growth

luxuriant

luxuriant

luxuriant

luxuriant

luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Emerson R. L., Whiffen A. J., Bohonos M. and DeBoer C., 1946, J. Bacteriol., 52:357.
2. Gottlieb D., Bhattacharya P. K., Anderson H. W. and Carter H. E., 1948, J. Bacteriol., 55:409.
3. Haynes W. C., Wickerham L. J. and Hesseltine C. W., 1955, Appl. Microbiol., 3:361.
4. Schmitz H. and Woodside R., 1955, Antibiot. Chemother., 5:652.

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