



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Halophilic Agar

Product Cod: DM 1590

Application: - Halophilic Agar is used for the isolation and cultivation of extremely halophilic bacteria.

Composition**

Ingredients	Gms / Litre
Casein acid hydrolysate	10.000
Yeast extract	10.000
Proteose peptone	5.000
Trisodium citrate	3.000
Potassium chloride	2.000
Magnesium sulphate	25.000
Sodium chloride	250.000
Agar	20.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Halophilic media are formulated for isolation and cultivation of halophilic species of *Halobacterium* and *Halococcus* from foods ^(1, 2). For optimum growth they require high salt concentration of about 20 - 30%. In general, the requirement of salt by halophilic microorganisms is not an exclusive need for NaCl since many species in addition to NaCl also require low levels of K⁺, Mg⁺⁺ and other cations anions ^(3, 4). These bacteria can cause pink discoloration on the outer surface due to putrefaction and decomposition of fish, bacon and hides preserved in sea salts.

Halophilic Agar contains casein acid hydrolysate, proteose peptone and yeast extract which provide all the necessary nutrients, mainly nitrogenous and vitamins to the halophilic bacteria. Trisodium citrate is added to avoid the losses ⁽²⁾. Magnesium sulphate, sodium chloride and potassium chloride are essential ions required for the growth of extreme halophiles.

10 gm sample is added to 90 ml Halophilic Broth (DM1591) and incubated at 35°C for upto 12 days. The organisms are then isolated onto Halophilic Agar from this enriched culture.

Methodology

Suspend 32.5 grams of powder media in 100 ml distilled water. Shake well & heat to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes

Quality Control

Physical Appearance

Off-white to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% Agar gel.



Colour and Clarity of prepared medium

Amber coloured, slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 32.5% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH Range 7.00-7.40

Cultural Response/Characteristics

DM 1590: Cultural characteristics observed after an incubation at 35-37°C for 12 days.

Organism

Halobacterium salinarium
ATCC 33171

Growth

luxuriant

Halococcus morrhuae
ATCC 17082

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^o in sealable plastic bags for 2-5 days.

Further Reading

1. Dundas I.E., 1977, Advances In Microbiology and Physiology, Rose H. and Tempest D.W. (Eds.), A.P. London.
2. Gibbons N.E., 1969, Methods In Microbiology, Vol. 3B, Norris J.R., and Ribbons D.W. (Eds.), A.P., New York, pp.169-183.
3. Kushner D. J., (Eds.), 1978, D. J. Kushner, pg 317, Academic Press, London, England
4. MacLeod R. A., 1965, Bacteriol., Rev., 29:9

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