

FT-A2WT20



Marine Agar

For the isolation and enumeration of heterotrophic marine bacteria

Product Description

Name :	Marine Agar
Catalog Number :	A2WT20, 500 g
Storage:	at +2 to +8°C ^(L) Protect from light and moisture Once opened keep powdered medium closed to avoid hydration.

USES

MARINE AGAR is a medium containing all the nutrients necessary to cultivate the majority of marine bacteria.

Since the marine environment is characterized by unique environmental conditions, its microflora is also unique. Marine microorganisms have the ability to survive at very low temperatures and at high salinity levels.

Both Marine Agar and Marine Broth (Cat. 1217) are prepared according to ZoBell, containing almost double the mineral content of sea water. The high salt content helps to simulate sea water. Bacteriological peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly of the B-group. Bacteriological agar is the solidifying agent.

Inoculate and incubate at 20 - 25°C for 24 – 72 hours.

Using the conventional plate count technique or streaking the surface of the plate yields good results. In the spread plate technique, the agar is poured while hot and allowed to cool before inoculation. However, precaution must be taken in the pour plate method to cool the medium to 42°C before pouring, as the majority of marine organisms are heat-sensitive.

PREPARATION

Suspend 55.20 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121°C for 15 minutes. Cool to 50°C, mix well and dispense into plates. The prepared medium should be stored at 8-15°C. The color is amber, slightly opalescent, and may present a light precipitation. It is recommended to homogenize the medium in its container before pouring into plates.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

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FORMULA (g/l)

Sodium Chloride : 19.40	Potassium Chloride : 0.55	Disodium Phosphate : 0.008
Magnesium Chloride : 8.80	Sodium Bicarbonate : 0.16	Sodium Silicate : 0.004
Bacteriological Peptone : 5.00	Ferric Citrate : 0.10	Sodium Fluoride : 0.0024
Sodium Sulfate : 3.24	Potassium Bromide : 0.08	Ammonium Nitrate : 0.0016
Calcium Chloride : 1.80	Strontium Chloride : 0.034	Bacteriological Agar: 15.00
Yeast Extract : 1.00	Boric Acid : 0.022	Final pH : 7.6 ± 0.2 at 25°C

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 20-25°C and observed after 24 - 72 hours.

Microorganisms	Growth
<i>Vibrio fischeri</i> ATCC 7744	Good
<i>Vibrio harveyi</i> ATCC 14126	Good

REFERENCES

J. Marine Research N:42. 1941. Limnology and Oceanography 5:78, 1960.
ZoBell, C.E. 1941. Studies on Marine Bacteria. I. The cultural requirements of heterotrophic aerobes. J.Mar.Res. 4:42-75.
Buck, J.D., and R.C. Cleverdon. 1960. The spread plate as a method for the enumeration of marine bacteria. Limnol. Oceanogr.
Weiner, R.M., A.M. Segall, and R.R. Colwell. 1985

Related products

- Agar, 291901
- Terrific Broth , 82111A
- NZCYM Broth, N1473A
- Marine Broth, A2WT30
- Brain Heart Infusion Broth JI0611
- TCBS Agar, CJ2382

Ordering information

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