TM 207 - ZOBELL MARINE AGAR 2216. (MARINE AGAR 2216)

INTENDED USE

For cultivation, isolation and enumeration of heterotrophic marine bacteria.

PRODUCT SUMMARY AND EXPLANATION

Zobell Marine Agar formulated by Zobell, has a composition that mimics seawater and thus helps the marine bacteria to grow abundantly. This medium has been used for the growth of marine bacteria.

Microorganisms in an aquatic environment may occur at all depths ranging from the surface region to the very bottom of the ocean trenches. The top layers and the bottom sediments harbor higher concentration of microorganisms. Marine microorganisms are vital to ecological cycles because they form the foundations of many food chains.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Yeast extract	1.000
Ferric citrate	0.100
Sodium chloride	19.450
Magnesium chloride	8.800
Sodium sulphate	3.240
Calcium chloride	1.800
Potassium chloride	0.550
Sodium bicarbonate	0.160
Potassium bromide	0.080
Strontium chloride	0.034
Boric acid	0.022
Sodium silicate	0.004
Sodium fluorate	0.0024
Ammonium nitrate	0.0016
Disodium phosphate	0.008
Agar	15.000

PRINCIPLE

Zobell Marine Agar 2216 contains the nutrients, which are required for the growth of marine bacteria. These media have minerals as in seawater and peptone and yeast extract as the sources of nutrients for the marine bacteria as reported by Jones. High amount of salt content is used to simulate seawater. Other minerals are used to mimic the mineral composition of seawater.

Pour plate and spread plate techniques can be used for enumeration. In the pour plate technique, the agar must be cooled to 42°C before inoculation to support thermo-sensitive nature of most marine bacteria. In spread plate technique, the medium is poured while still hot and allowed to cool and solidify before inoculation.

INSTRUCTION FOR USE

- Dissolve 55.25 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C.Mix well and Pour in sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured opalescent gel forms in Petri plates.
pH (at 25°C) : 7.6±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Vibrio fischeri	7744	50-100	Good-luxuriant	>=50%	20-25°C	40-72 Hours
Vibrio harveyi	14126	50-100	Good-luxuriant	>=50%	20-25°C	40-72 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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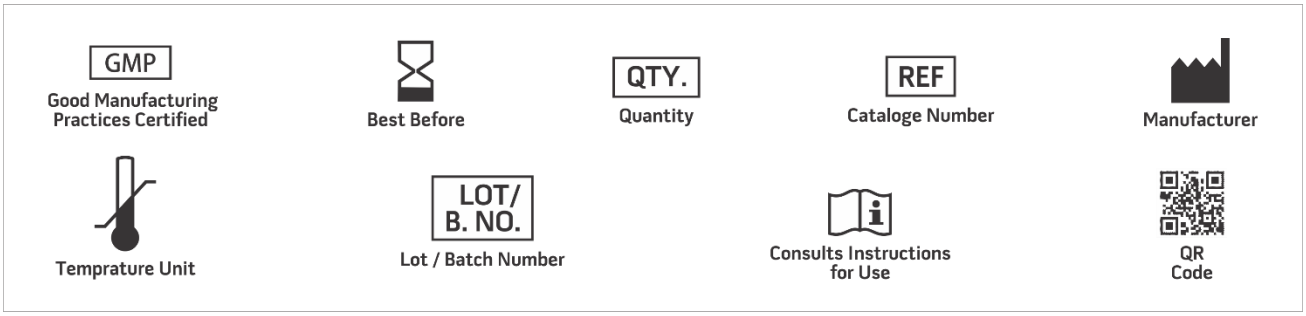

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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