

## 76448 Marine Broth 2216

Marine Broth 2216 is used for cultivating heterotrophic marine bacteria.

### Composition:

Ingredients	Grams/Litre
Peptone	5.0
Yeast Extract	1.0
Ferric Citrate	0.1
Sodium Chloride	19.45
Magnesium Chloride	5.9
Magnesium Sulfate	3.24
Calcium Chloride	1.8
Potassium Chloride	0.55
Sodium Bicarbonate	0.16
Potassium Bromide	0.08
Strontium Chloride	0.034
Boric Acid	0.022
Sodium Silicate	0.004
Sodium Fluoride	0.0024
Ammonium Nitrate	0.0016
Disodium Phosphate	0.008
Final pH 7.6 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: Faint yellow, faint beige to faint brown coloured, homogeneous, powder.  
 Colour and Clarity: Light yellow, yellow-brown to light brown, clear to opalescent solution.

### Directions:

Suspend the powder in 1 L of purified water: Marine Broth 2216 - 37.4 g. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder. Autoclave at 121°C for 15 minutes.

### Principle and Interpretation:

Microorganisms in an aquatic environment may occur at all depths ranging from the surface region to the very bottom of the ocean trenches and also in the sediment. It was observed that the top layers and the bottom sediments contains higher concentration of microorganisms (6). Marine microorganisms play an important role to ecological cycles because they form the foundations of many food chains (1). Marine Broth formulated by Zobell (10), has a composition that mimics seawater (5) and thus helps the marine bacteria to grow abundantly. This medium has been used for the growth of marine bacteria (7,8).

Marine Broth contains the nutrients, salt and trace elements which are required for the growth of marine bacteria. These media have minerals and salts as in seawater (9) and peptone and yeast extract provides nitrogenous compounds for the marine bacteria as reported by Jones (3). High amount of salt content is used to simulate seawater. Other minerals are used to mimic the mineral composition of seawater.

For marine water samples follow appropriate techniques for handling specimens as per established guidelines (7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.



Cultural characteristics after 4-7 days at 35-37°C.

Organisms (ATCC)	Growth
<i>Vibrio fischeri</i> (7744)	+++
<i>Vibrio harveyi</i> (14126)	+++

#### References:

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#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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