

## Zobell Marine Agar 2216 (i23372)

Marine Agar 2216 is used for cultivating heterotrophic marine bacteria.

## Principles & Uses

Marine Agar 2216 and Marine Broth 2216 are tailored to nurture marine bacteria, fundamental to marine ecosystems. Prepared according to ZoBell's formula, they encompass vital nutrients, including peptone and yeast extract, mimicking the unique composition of sea water. The high salt content replicates marine conditions, fostering the survival of microorganisms in various oceanic depths.

Utilizing Marine Agar 2216, enumeration employs conventional pour and spread plate techniques. The pour plate method requires cooling the agar to 42°C before inoculation due to the thermo-sensitive nature of marine bacteria. Conversely, in the spread plate approach, hot agar is poured, allowed to cool, and then solidified before inoculation, reportedly yielding higher counts.

Sizemore and Stevenson incorporated Marine Agar 2216 in a double-layer plate for isolating proteolytic marine bacteria, emphasizing its versatility. The use of these media aligns with their composition, offering a platform for accurate enumeration and ecological exploration in marine microbiology.

## Composition (gr/L)

Peptone 5 g, Yeast Extract 1 g, Ferric Citrate 0.1 g, Sodium Chloride 19.45 g, Sodium Sulfate 3.24 g, Magnesium Chloride 8.8 g, Calcium Chloride 1.8 g, Potassium Chloride 0.55 g, Sodium Bicarbonate 0.16 g, Potassium Bromide 0.08 g, Strontium Chloride, 34 mg, Boric Acid 22 mg, Sodium Silicate 4 mg, Sodium Fluoride 2.4 mg, Ammonium Nitrate 1.6 mg, Disodium Phosphate 8 mg, Agar 15 g.

Final pH at 25°C 7.6 ± 0.2

## Preparation from dehydrated Powder

Dissolve 55.1 g of the powder in 1 L of purified water. Autoclave at 121°C for 15 minutes.

## Quality Control

Dehydrated Appearance: Light beige with a few dark particles, free flowing.

Prepared Appearance: light amber, slightly opalescent to opalescent may have a slight precipitate, may contain dark particles.

Reaction of 5.51% Solution at 25°C: pH 7.6 ± 0.2

## Cultural Response

Cultural response observed after an incubation at 20 - 25°C on a shaker for 40 - 72 hours.

Organism (ATCC*)	Recovery
<i>Vibrio fischeri</i> (7744)	Good
<i>Vibrio harveyi</i> (14126)	Good

\*ATCC is a registered trade mark of the American Type Culture Collection.

## Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.