



## Proteose Agar

M1176

Proteose Agar is used for the cultivation of *Vibrio* species from foods in accordance with APHA.

### Composition\*\*

Ingredients	Gms / Litre
Proteose peptone	15.000
Yeast extract	7.500
Casein acid hydrolysate	5.000
Starch, soluble	1.000
Dipotassium hydrogen phosphate	5.000
Ammonium sulphate	1.500
Agar	15.000
Final pH ( at 25°C)	9.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 50 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in 10 ml amounts into test tubes of 16 x 150 mm size. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Incline while cooling to obtain a long slant.

### Principle And Interpretation

*Vibrios* are fairly easy to isolate from both clinical and environmental materials, though some species may require growth factors and/or vitamins. *Vibrio parahaemolyticus* is the leading cause of bacterial diarrhoea associated with the consumption of contaminated food products. Media can be made selective for *Vibrios* by addition of appropriate selective agents (1). High concentrations of NaCl and alkaline pH have also been used to select certain *Vibrio* species, based on the ability of most *Vibrios* to grow at pH values above 8.0 and at 3% or higher concentrations of NaCl. Proteose Agar is used for cultivating *Vibrio* species from foods as per APHA (2). This medium does not contain any inhibitor or indicator. However it has a relatively high (alkaline) pH, which suppresses the growth of most of the organisms that are non-alkalophilic or alkali non-tolerant. Proteose Agar medium is nutritious due to the incorporation of nitrogenous compounds such as proteose peptone, yeast extract and casein acid hydrolysate. Dipotassium phosphate and ammonium sulphate provide ions and also buffer the medium. Starch is a carbohydrate source and can also neutralize the toxic fatty acids present in the agar medium if any.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity

Yellow coloured Clear to slightly opalescent gel forms in tubes as butts

#### Reaction

Reaction of 5.0% w/v aqueous solution at 25°C. pH : 9.0±0.2

#### pH

8.80-9.20

#### Cultural Response

M1176: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
<b>Cultural Response</b> <i>Vibrio cholerae</i> ATCC	50-100	luxuriant

15748

Please refer disclaimer Overleaf.

*Vibrio parahaemolyticus* 50-100 luxuriant  
ATCC 17802

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

### Reference

1. Collee J.G., Duguid J.P., Marmion B.P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1989, 13th Edition, Churchill Livingstone.
2. Downes F.P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.

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