# TM 1166 – DIHYDROLASE BROTH BASE

## INTENDED USE

For detection of dihydrolase reaction of *Vibrio parahaemolyticus*.

## PRODUCT SUMMARY AND EXPLANATION

*Vibrios* are fairly easy to isolate from both clinical and environmental material, 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. Dihydrolase Broth Base is formulated as per APHA and is used for studying dihydrolase reaction of *V. parahaemolyticus*.

## COMPOSITION

| Ingredients | Gms / Ltr |
|---|---|
| **Peptone** | 5.000 |
| **Yeast extract** | 6.000 |
| **Dextrose (Glucose)** | 2.000 |
| **Sodium chloride** | 30.000 |
| **Bromo cresol purple** | 0.032 |

## PRINCIPLE

The medium consists of Peptone and yeast extract which provide nitrogenous nutrients to support bacterial growth. Dextrose is the fermentable carbohydrate. Sodium chloride maintains osmotic equilibrium.

## INSTRUCTION FOR USE

- Dissolve 43.03 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Divide in 2 parts. Add 0.5% L-Arginine to first portion. Use second portion as control.
- Dissolve completely and dispense 3.0 ml into 13 mm x 100 mm screw cap tube.
- Sterilize by autoclaving at 10 psi pressure (115°C) for 15 minutes.

## QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Cream to yellow homogeneous free flowing powder.
**Appearance of prepared medium** : Purple coloured, clear solution without any precipitate.
**pH (at 25°C)** : 6.8 ± 0.2

## INTERPRETATION

Cultural characteristics observed with added 0.5% L-Arginine after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Arginine dihydrolase | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|---|

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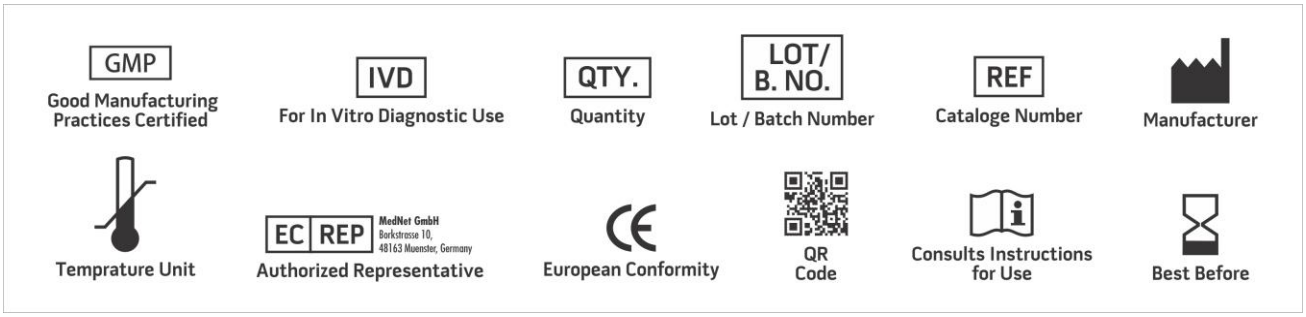
|---|---|---|---|---|---|---|
| *Vibrio cholerae* | 15748 | 50-100 | Good-luxuriant | Negative reaction, yellow colour | 35-37°C | 18 - 24 Hours |
| *Vibrio parahaemolyticus* | 17802 | 50-100 | Good-luxuriant | Negative reaction, yellow colour | 35-37°C | 18 - 24 Hours |

**PACKAGING:**
In pack size of 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**
1 Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th edition, Churchill Livingstone.
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
3. Moeller V., 1955, Acta Pathol. Microbiol. Scand., 36:158.
4. Oginsky E. L. and Gehrig R. F., 1953, J. Biol. Chem., 204:721.




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

***For Lab Use Only**
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