

TM 482 - VIOLET RED BILE BROTH

INTENDED USE

For detection and enumeration of coliform bacteria in water and food.

PRODUCT SUMMARY AND EXPLANATION

Violet Red Bile Broth, a modification of MacConkeys original formulation is used for the enumeration of *coli-aerogens* bacterial group. It relies on the use of the selective inhibitory components crystals violet and bile salts and the indicator system lactose, and neutral red. Thus, the growth of many unwanted organisms is suppressed, while tentative identification of sought bacteria can be made. Lactose non-fermenters and late lactose fermenters produce pale coloured medium. Other related gram- negative bacteria can be suppressed by incubation at >42°C or by anaerobic incubation. Incubation may be carried out at >42°C for 18 hours, 32°C for 24-48 hours or 4°C for 10 days depending on the temperature characteristics of the organisms to be recovered. Violet red bile Broth is similar to VRBA, except agar that is recommended by APHA.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	7.000
Yeast extract	3.000
Bile salts mixture	1.500
Lactose	10.000
Sodium chloride	5.000
Neutral red	0.030
Crystal violet	0.002

PRINCIPLE

Peptic digest of animal tissue and yeast extract serve as sources of carbon, nitrogen, vitamins and other essential growth nutrients. Lactose is the fermentable carbohydrate, utilization of which leads to the production of acids. Neutral red indicator detects the acidity so formed. Crystal violet and bile salts mixture help to inhibit the accompanying gram-positive and unrelated flora. Sodium chloride maintains the osmotic equilibrium. Further biochemical tests are necessary for positive identification.

INSTRUCTION FOR USE

- Dissolve 26.53 grams in 1000 ml distilled water.
- Heat with stirring to boiling to dissolve the medium completely, do not autoclave.
- Cool to 45°C and dispense into sterile tubes containing the inoculum.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pinkish beige homogeneous free flowing powder.
Appearance of prepared medium : Reddish purple coloured clear solution in tubes.
pH (at 25°C) : 7.4±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Color of the colony	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Pink to pinkish Red	35-37°C	18-24 Hours
<i>Enterobacter aerogenes</i>	13048	50-100	Luxuriant	Pink to pinkish Red	35-37°C	18-24 Hours
<i>Salmonella Enteritidis</i>	13076	50-100	Luxuriant	Colourless to orangish yellow	35-37°C	18-24 Hours
<i>Staphylococcus aureus</i>	25923	$\geq 10^3$	Inhibited	-	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.

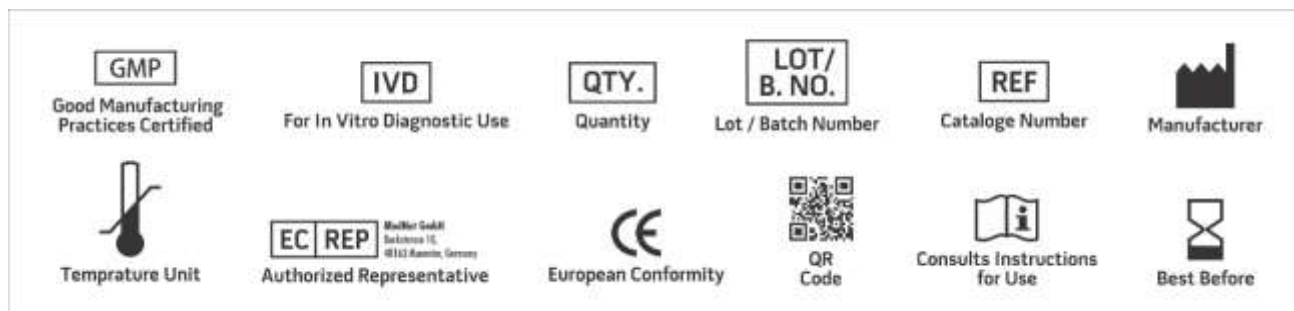
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. MacConkey A., 1905, J. Hyg., 5, 333-379.
2. Mossel D. A. A. and Vega C. L., 1973, Hlth. Lab. Sci., 11:303
3. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.
4. Marshall R. T., (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th Ed., APHA, Washington, D. C.
5. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, 6. Williams and Wilkins, Baltimore.



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

***For Lab Use Only**
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