TM 1498 – ANAEROBIC BASAL BROTH

INTENDED USE

For cultivation of anaerobic microorganisms like *Bacteroides* and other fastidious anaerobes.

PRODUCT SUMMARY AND EXPLANATION

Bacteroides are major bacteria found in the human normal flora, harboring in the intestinal tract. They are generally opportunistic anaerobes and can cause a variety of infections throughout the body. The most common infections include pleuropulmonary, intraabdominal and infections of the female urogenital tract. *Bacteroides* make up about one-third of the total anaerobic isolates obtained from various infections. Anaerobic Basal broth is recommended for fastidious anaerobes like *Bacteroides* species. Anaerobic organisms require reducing conditions and an absence of dissolved oxygen in the medium. Strict anaerobes obtain its energy and intermediates through oxidation utilizing hydrogen acceptors other than oxygen. Prereducing the medium by boiling to drive off the oxygen can expel this. Also reducing agents such as thioglycollate or cysteine can be added to the medium.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	16.000
Yeast extract	7.000
Sodium chloride	5.000
Starch	1.000
Dextrose	1.000
Sodium pyruvate	1.000
Arginine	1.000
Sodium succinate	0.500
Sodium bicarbonate	0.400
L-Cysteine HCl	0.500
Ferric pyrophosphate	0.500
Hemin	0.005
Vitamin K	0.0005
Dithiothreitol	1.000
Sodium thioglycollate	0.500

PRINCIPLE

Anaerobic Basal broth contains peptone and yeast extract which provides nitrogen and carbon source, long chain amino acidsand necessary vitamins for growth of *Bacteroides*. Starch absorbs toxic metabolites produced. Sufficient arginine is added to ensure the growth of *Eubacterium lentum*. Hemin and Vitamin K serves as growth factors for many *Bacteroides* species. Sodium succinate improves the growth of *Prevotella melaninogenica* and *Bacteroides* species. Sodium pyruvate is the energy source and also acts similarly to catalase and degrades traces of hydrogen peroxide, which may be produced by the action of molecular oxygen on media components. L-cysteine hydrochloride and dithiothreitol act as reducing agents.

INSTRUCTION FOR USE

- Dissolve 35.4 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 50-55ºC and aseptically add 5-10% v/v sterile defibrinated horse blood.
- Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Basal medium: Light amber coloured clear to slightly opalescent. After addition of 5%w/v sterile defibrinated blood : Cherry red coloured opaque solution in tubes

pH (at 25°C) : 6.8±0.2

INTERPRETATION

Cultural characteristics observed after incubation with added 5% w/v sterile defibrinated blood.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Peptostreptococcus anaerobius	27337	50-100	Luxuriant	35-37°C	18-48 Hours
Prevotella melaninogenicus	15930	50-100	Luxuriant	35-37°C	18-48 Hours
Clostridium perfringens	13124	50-100	Luxuriant	35-37°C	18-48 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.

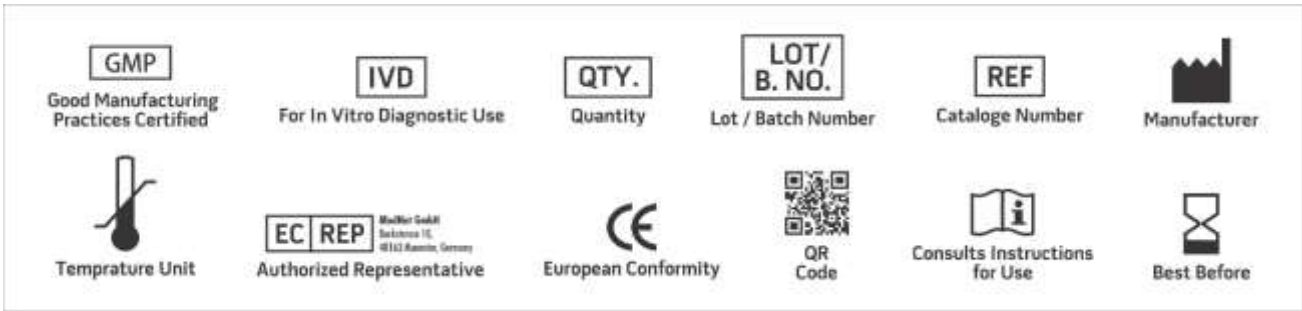
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

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. , Marmimon B. P., Simmons A., (Eds.), 1996, Mackie and McCartney , Practical Medical Microbiology, 14th Ed.,Churchill Livingstone.
2. Ajello G.W. Geely JC, Hayes PS et al. J. Clin. Micro. 1984:20:55-8.
3. Sperry JF. Wilkins TD. J. Bacteriol. 1976:127:780-784.
4. Gibbons RJ and MacDonnald JB. J. Bact, 1960:80:164-170.
5. Lev M. Keudell KC and Milford AF. J. bact, 1971:108:175-8.
6. Neilson PA. J. Clin. Micr, 1983:17:276-279.
7. Shanson DC and Singh J. J. Clin. Path. 1981:34:221-3.



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

***For Lab Use Only**

Revision: 20 July 2024