

TM 1144 – BACTEROIDES BILE ESCULIN AGAR BASE (BBE AGAR BASE)

INTENDED USE

For selective isolation, identification and cultivation of *Bacteroides fragilis* group.

PRODUCT SUMMARY AND EXPLANATION

Bacteroides is the most common member of the normal gut flora and can cause serious infections if the normal GI mucosal barrier is breached. In the bloodstream, the organism can be carried to virtually any organ of the body. The *Bacteroides fragilis* group is more resistant to antimicrobial agents than most other anaerobes and therefore immediate identification and prompt treatment is of vital importance. Bacteroides Bile Esculin Agar formulated by Livingston, Kominos and Yee is used as a primary isolation medium for the selective and presumptive identification of *Bacteroides fragilis* group. Accompanying gram-negative organisms can be totally inhibited due to the presence of oxgall and gentamicin, with the latter added as a supplement. The medium is differential for *B. fragilis* group because of esculin hydrolysis test. *B. fragilis* hydrolyses the esculin present in the medium to esculetin and dextrose. The esculetin thus produced reacts with ferric ammonium citrate, present in the medium to form a brown-black coloured complex that is deposited around the colonies as a black halo.

The minimum inhibitory concentration of 80 mcg/ml or greater is required for *Bacteroides fragilis* group organisms. The medium can be directly inoculated with the specimen. Since the medium is highly selective, a non-selective medium should be also inoculated with the specimen. *B. fragilis* group grow well on this medium. However, *B. vulgatus* usually does not hydrolyze esculin thus no discoloration to the surrounding medium is observed.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	15.000
Soya peptone	5.000
Sodium chloride	5.000
Bile	20.000
Esculin	1.000
Ferric ammonium citrate	0.500
Hemin	0.010
Vitamin K1	0.010
Agar	15.000

PRINCIPLE

The medium contains highly nutritious Tryptone and Soya peptone which provide nitrogen and carbon source, long chain amino acids, vitamins and other essential nutrients. Hemin, which support growth of fastidious anaerobic bacteria like Bacteroides species. Bile inhibits almost all anaerobic gram-negative bacilli except *Bacteroides fragilis*.

INSTRUCTION FOR USE

- Dissolve 61.52 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add rehydrated contents of two vials of Bacteroides Selective Supplement.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Medium amber coloured, clear to slightly opalescent gel with a bluish tinge forms in Petri plates.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Cultural characteristics observed after anaerobic incubation with added Bacteroides Selective Supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Esculin hydrolysis	Incubation Temperature	Incubation Period
<i>Bacteroides fragili</i>	23745	50-100	Good-luxuriant	≥50%	Positive reaction, blackening of the medium	35-37°C	40-48 Hours
<i>Bacteroides vulgatus</i>	8482	50-100	Good-luxuriant	≥50%	Negative reaction	35-37°C	40-48 Hours
<i>Clostridium perfringens</i>	13124	≥10 ⁴	Inhibited	0%	-	35-37°C	40-48 Hours
<i>Proteus mirabilis</i>	12453	50-100	Good-luxuriant	≥50%	Negative reaction	35-37°C	40-48 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. Finegold S.M. and Sutler V.L., 1971, J. Infect. Dis., 124:556.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Livingston, Kominos and Yee, 1978, J. Clin. Microbiol., 7:448.
4. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
5. Shimada K., Sutler V.L. and Finegold S.M., 1970, Appl. Microbiol. 1.345138889



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Barkstrasse 10, 49163 Muenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

***For Lab Use Only**
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