

TM 2005 –BILE ESCULIN AGAR, MODIFIED

INTENDED USE

For isolation and presumptive identification of group D Streptococci/Enterococci from food and pharmaceutical products.

PRODUCT SUMMARY AND EXPLANATION

This medium is a modification of Bile esculin agar, that differs in content of bile. The value of bile tolerance together with hydrolysis of esculin as a means of presumptive identification of group D streptococci/ enterococci is widely recognized. Bile esculin agar was formulated by Swan for the isolation and identification of Group D Streptococci from food. This medium was also shows differentiation of *Enterobacteriaceae*, *Klebsiella* and *Enterobacter-Serratia* division from other *Enterobacteriaceae* genera on the basis of esculin hydrolysis.

The medium contains 2% bile that inhibits gram-positive bacteria other than group D Streptococci and Enterococci. Enterococci and Group D Streptococci hydrolyzes esculin to esculetin and dextrose, which reacts with ferric citrate producing brownish black precipitate. Originally Bile esculin test was used for identification of Enterococci. But it was found that this test is also shared by group D Streptococci and therefore it is recommended that other tests such as salt tolerance be performed while identifying Enterococci.

COMPOSITION

| Ingredients | Gms / Ltr |
|----------------|-----------|
| Peptone | 5.000 |
| Beef extract | 3.000 |
| Oxgall | 20.000 |
| Esculin | 1.000 |
| Ferric citrate | 0.500 |
| Agar | 15.000 |

PRINCIPLE

Peptone and meat extract provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients.

INSTRUCTION FOR USE

- Dissolve 44.5 grams of in 1000 ml purified/ distilled water.
- Heat to boiling to dissolve the medium completely.
- Mix and dispense into tubes or flasks as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Allow the tubed medium to solidify in slanted position

QUALITY CONTROL SPECIFICATIONS

| | |
|--------------------------------------|---|
| Appearance of Powder | : Light yellow to brownish yellow coloured homogeneous free flowing powder. |
| Appearance of prepared medium | : Yellow coloured clear to slightly opalescent gel with/without a bluish tinge forms in Petri plates. |
| pH (at 25°C) | : 7.1±0.2 |

INTERPRETATION

Cultural characteristics observed after incubation.



| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Esculin hydrolysis | Incubation Temperature | Incubation Period |
|-------------------------------|-------|-------------------|-----------|----------|--------------------|------------------------|-------------------|
| <i>Enterococcus faecalis</i> | 29212 | 50-100 | Luxuriant | >=70% | Positive | 35-37°C | 18-24 Hours |
| <i>Streptococcus pyogenes</i> | 12344 | 50-100 | Luxuriant | >=70% | Negative | 35-37°C | 18-24 Hours |
| <i>Klebsiella aerogenes</i> | 13048 | 50-100 | Luxuriant | >=70% | Positive | 35-37°C | 18-24 Hours |
| <i>Proteus mirabilis</i> | 25933 | 50-100 | Luxuriant | >=70% | Negative | 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.Edberg S.C., Pittman S., and Singer J.M., 1977, J. Clin. Microbiol., 6:111.
- 2.Facklam R., 1972, Appl. Microbiol., 23:1131.
- 3.Facklam R., 1973, Appl. Microbiol., 26:138.

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|  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 48163 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**
Revision: 08 Nov., 2019