BacterLab Division

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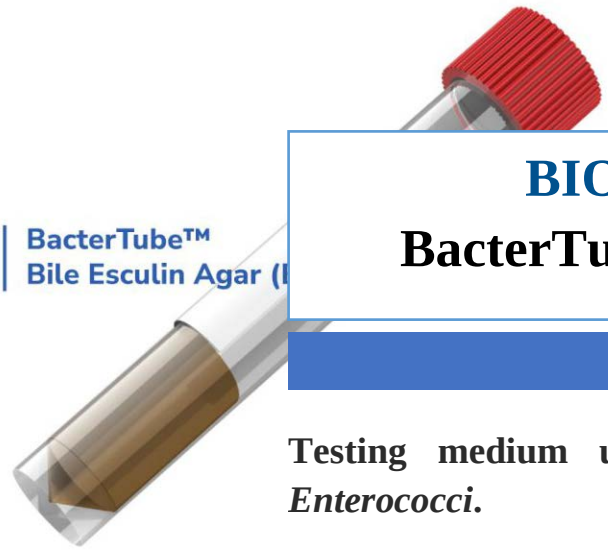


# BIOCHEMICAL MEDIUM

# BacterTube™ Bile Esculin Agar (BEA)

**Testing medium used for the isolation and differentiation of *Enterococci*.**

## Code: 08031

## 1. INTENDED USE

**BacterTube™ Bile Esculin Agar (BEA)** is recommended for use as a differential medium in the isolation and presumptive identification of *enterococci*/ group D *streptococci*.

## 2. PRINCIPLES

**BacterTube™ Bile Esculin Agar (BEA)** contains esculin, ferric citrate to provide ferric ions, and 4% oxbile to inhibit most other strains of nongroup D *streptococci*. Esculin is hydrolyzed by group D *streptococci* to form dextrose and esculetin. This compound reacts with the ferric ions contained within the medium, turning the medium from its original amber color to a dark brown to black. Thus the tolerance to the presence of oxbile and the hydrolysis of esculin provide the means to presumptively identify group D *streptococci*.

## 3. TYPICAL COMPOSITION

*For 1 liter of medium*

| | |
|---|---|
| Tryptone | 17,0 g |
| Peptic digest of meat | 3,0 g |
| Yeast extract | 5,0 g |
| Bacteriological ox bile | 10,0 g |
| Sodium chloride | 5,0 g |
| Esculin | 1,0 g |
| Ferric ammonium citrate | 0,5 g |
| Sodium azide | 0,15 g |
| Agar | 13,0 g |

***pH of the ready-to-use medium at 25°C: 7,1 ± 0,2***

## 4. PREPARATION

The environmental plates are ready-to-use, no preparation required.

## 5. INSTRUCTIONS FOR USE

- Allow the **BacterTube™ Bile Esculin Agar (BEA)** warm to room temperature before use.
- Inoculate and streak the medium with one isolated pure colony.
- Incubate in an aerobic atmosphere at 35ºC for 24-48 hours.
- Observe for growth and blackening of the medium.

**NOTE**:

- This product is not intended for primary isolation of patient specimens. It should be used only with cultures of isolated organism.
- This product is used in conjunction with other biochemical tests to identify cultures of isolated organism.

## 6. RESULTS

- The enterococci appear as small translucent colonies surrounded by a black halo.

- Staphylococci and yeasts may yield opaque colonies without a black halo.
- It is indispensable to identify suspected bacteria, especially to eliminate confusion with Listeria which may give rise to colonies similar to those of enterococci.

## 7. QUALITY CONTROL

**BacterLab** ensures the quality of each product batch by testing with ATCC reference strains.

| Reference Strains | Incubation Conditions | Expected Results |
|---|---|---|
| *Enterococcus faecalis* ATCC 29212 | 35 – 37°C<br>18 – 24 hours, aerobic | Good growth, black zone around the colony |
| *Streptococcus pyogenes* ATCC 19615 | | Inhibited, no growth |

## 8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 2 – 8°C.
- Transportation: Ambient temperature.

## 9. PACKAGING

- Packaging: 50 tubes/ box or as per customer request.

## 10. SHELF LIFE

- Expiration Date: 3 months from the manufacturing date.

## 11. BIBLIOGRAPHY

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- Rodier, J. (1984). *L'analyse de l'eau. Dénombrement des streptocoques fécaux présumés (Méthode par ensemencement en milieux liquides)*. Dunod 7ème Ed., 825-828.
- NF EN ISO 7899-2. Août 2000. *Qualité de l'eau. Recherche et dénombrement des entérocoques intestinaux. Partie 2 : Méthode par filtration sur membrane.*
- NF T 90-421. Août 2006. *Essais des eaux. Examens bactériologiques des eaux de piscines.*
- NF EN 15788. Décembre 2009. *Aliments des animaux. Isolement et dénombrement de l'entérocoque (E. faecium) spp.*.

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