

## TM 2220 - MUD SF BROTH BASE

### INTENDED USE

For detection and enumeration of intestinal Enterococci on surface and waste water by MPN method.

### PRODUCT SUMMARY AND EXPLANATION

The normal habitat of faecal Streptococci is the gastrointestinal tract of warm-blooded animals. The *Enterococcus* group is a subgroup of the faecal Streptococci that includes *E. faecalis*, *E. faecium*, *S. gallinarum* and *S. avium*. The Enterococci are differentiated from other Streptococci by their ability to grow in high sodium chloride concentration i.e. 6.5% at pH 9.6 and at 10°C to 45°C. The Enterococci portion of the faecal *Streptococcus* group is a valuable bacterial indicator for determining the extent of faecal contamination of recreational surface waters. The multiple tube techniques are applicable primarily to raw and chlorinated waste-water and sediments and can be used for fresh and marine waters. MUD SF Broth is prepared as per the formula accepted by ISO committee under the specification ISO 7899-1:1998 for detection and enumeration of Enterococci in surface and waste water by miniaturized method (MPN). The diluted sample is inoculated in a row of microtitre plate wells containing dehydrated culture medium. Once the microtitre plate is inoculated, cover with disposable sterile adhesive tape and incubate the plate at 44°C for minimum of 36 hours and maximum 72 hours. Observe under UV light at 366 nm in the dark after an incubation period of 36 to 72 hours. The presence of Enterococci is indicated by fluorescence resulting from the hydrolysis of MUD. The results are reported as Most Probable Number per 100 ml.

### COMPOSITION

Ingredients	Gms / Ltr
Tryptose	40.000
Monopotassium phosphate	10.000
D-Galactose	2.000
Tween 80 (Polysorbate 80)	1.500
4-Methylumbelliferyl-beta-D-glucoside (MUD)	0.150

### PRINCIPLE

Tryptose provides carbonaceous, nitrogenous and other essential growth nutrients. Galactose serves as energy source. Phosphate buffers the medium well. Tween 80, (Polyoxyethylene sorbitan monooleate) provides fatty acids. MUD (4-Methylumbelliferyl-D-glucoside) is added as fluorogenic substance. Intestinal Enterococci are capable of anaerobic growth at 44°C and of hydrolyzing 4-methylumbelliferyl-β-D-glucoside (MUD) in the presence of thallium acetate, nalidixic acid (as FD) and 2, 3, 5-Triphenyltetrazolium chloride resulting in blue fluorescence.

### INSTRUCTION FOR USE

- Dissolve 53.60 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 45-50°C and aseptically add rehydrated contents of one vial of Enterococcus Selective Supplement and 1 ml of sterile 1% TTC Solution.
- Mix well and dispense as desired.

### QUALITY CONTROL SPECIFICATIONS



**Appearance of Powder** : Cream to yellow homogeneous free flowing powder  
**Appearance of prepared medium** : Light amber coloured clear solution  
**pH (at 25°C)** : 7.5±0.2

**INTERPRETATION**

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Fluorescence at 366 nm	Incubation Temperature	Incubation Period
<i>Enterococcus faecalis</i>	29212	50-100	luxuriant	>=70 %	positive, blue	44°C	36-72 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. International Organization for Standardization (ISO), ISO 7899-1:1998.

 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 MedNet GmbH Borkstrasse 10, 49163 Maenster, Germany Authorized Representative	 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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