TM 1793 – BILE ESCULIN AZIDE BROTH

INTENDED USE

For selective isolation and presumptive identification of faecal Enterococci.

PRODUCT SUMMARY AND EXPLANATION

Rochaix first demonstrated the value of esculin hydrolysis in the identification of enterococci. Meyer et al found that 61 of 62 strains of enterococci hydrolyzed esculin in a medium containing bile, Swan determined that positive results obtained on esculin agar incorporated with 40% bile correlated well with serologically confirmed group D streptococci. Using Swan's formula, Facklam and Moody tested over 700 strains of streptococci and enterococci representing all known serological groups. All strains of group D streptococci and enterococci were found to be bile-resistant and esculin-positive. Isenberg et al. modified the formulation of Swan by reducing the concentration of bile and adding the selective agent, sodium azide. The lower concentration of bile is less inhibitory to non-group D streptococci.

COMPOSITION

Ingredients	Gms / Ltr
Casein peptone	17.000
Yeast extract	5.000
Oxgall (10% Bile)	10.000
Sodium chloride	5.000
Meat peptone	3.000
Esculin	1.000
Sodium citrate	1.000
Ferric ammonium citrate	0.500
Sodium azide	0.250

PRINCIPLE

Group D streptococci and enterococci hydrolyze esculin in the presence of bile, resulting in the production of esculetin and dextrose. Ferric ammonium citrate supplies ferric ions which react with esculetin to form a brown-black complex. Sodium azide and 1% oxgall (equivalent to 10% bile) are selective agents inhibitory to gram-negative bacilli and gram-positive bacteria other than group D streptococci and enterococci.

INSTRUCTION FOR USE

- Dissolve 43 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes or flasks as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Amber coloured, clear solution having slight purplish tinge.
pH (at 25°C) : 7.1±0.2

INTERPRETATION

Cultural characteristics observed after incubation (anaerobically or in 5-10% CO_2).

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Esculin hydrolysis	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	50-100	Luxuriant	>=70%	Positive reaction, blackening of medium around the colony	33-37°C	18-24 Hours
Escherichia coli	25922	50-100	Inhibited	0%	-	33-37°C	18-24 Hours
Staphylococcus ganolytics	9098	50-100	Good	40-50%	Positive reaction, blackening of medium around the colony	33-37°C	18-24 Hours
Streptococcus pyogenes	19615	50-100	Inhibited	0%	-	33-37°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. Rochaix, A. 1924. C.R. Soc. Biol. 90:771-772.
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6. Facklam, R.R. 1972. Appl. Microbiol. 23:1131-1139.
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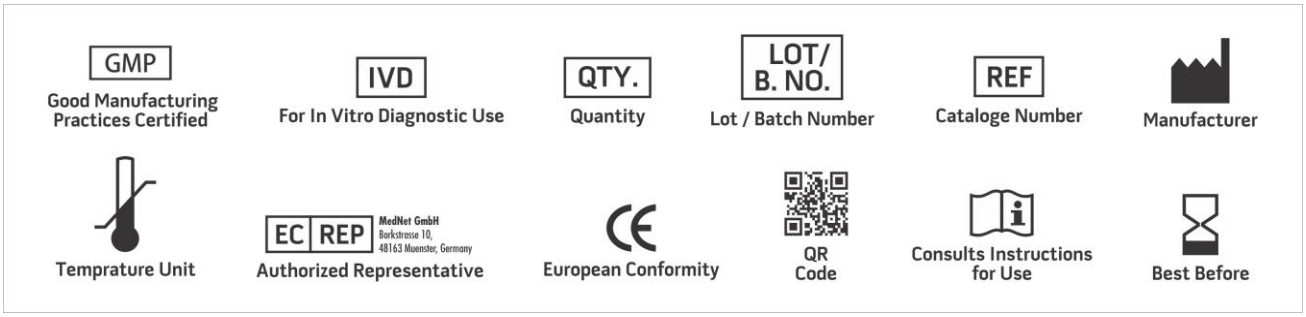

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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