BILE ESCULIN AGAR

INTENDED USE:
A differential medium for the isolation and presumptive identification of enterococci / Group D streptococci.

PRINCIPLE AND INTERPRETATION:
The major use of Bile Aesculin Agar is to differentiate between enterococci / Group D streptococci and non Group D streptococci. It may also be used for the presumptive identification of other groups of organisms.

Enterococci / Group D streptococci hydrolyse aesculin to form aesculetin and dextrose. Aesculetin combines with ferric citrate in the medium to form a dark brown or black complex which is indicative of a positive result. Bile salts will inhibit Gram-positive bacteria other than enterococci / Group D streptococci.

The value of bile tolerance together with hydrolysis of aesculin as a means of presumptively identifying enterococci / Group D streptococci is widely recognised.[1,2,3,4,5]

The use of these parameters forms the basis of Bile Aesculin Agar and was described by Swan[6] who concluded that the use of this medium is a valid alternative to Lancefield grouping for the recognition of enterococci / Group D streptococci.

Facklam[7] further confirmed its usefulness in differentiating enterococci / Group D streptococci from non Group D streptococci while other workers have used the medium for presumptive identification of the Klebsiella-Enterobacter- Serratiagroup amongst the Enterobacteriaceae.[8,9,10]

COMPOSITION:

Ingredients	Gr/Liter
Peptone	14 gr
Bile salts	15 gr
Ferric citrate	0,5 gr
Aesculin	1 gr
Agar	14 gr

***Formula adjusted, standardized to suit performance parameters

pH: 7,1 ± 0,2

PRECAUTIONS:
For professional use only. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:
Using a sterile loop inoculate the medium with 4-5 colonies and incubate at 37°C for 18-24 hours. The result is positive for bile salt tolerance and aesculin hydrolysis if blackening of the medium occurs.

QUALITY CONTROL:
1.Sterility Control:
Incubation 72 hours at 20-25°C and 48 hours at 30-35°C: NO GROWTH

2.Phsical/Chemical Control
pH: 7,1 ± 0,2
Apperance: Dark, olive green with a blue tint

3.Microbiological Control: Incubation at 37 °C during 18-24 h.

Microorganism	Inoculum (CFU)	Results	
		Growth	Reaction
Enterococcus faecalis ATCC 29212	10-100	Growth	Good growth; black colonies
Enterobacter aerogenes ATCC 13048	10-100	Growth	Good growth; brown coloured colonies with aesculin hydrolysis
Streptococcus pneumoniae ATCC 6305	100-1000	No growth	-

STORAGE CONDITIONS AND SHELF LIFE:

Store the prepared medium at 2 - 12°C. Use before expiry date on the label. Do not use beyond stated expiry date.

DISPOSAL:

Incubated prepared medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected plate should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 02054
Packaging: Single wrap
Content: 10 plates/each package

REFERENCES:

1. Facklam R. R. and Moody M. D. (1970). Appl. Microbiol. 20, 245-250.
2. Isenberg H. D., Goldberg D. and Sampson J. (1970). Appl. Microbiol. 20, 433-436.
3. Sabbaj J., Sutter V. L. and Finegold S. M. (1971). Appl. Microbiol. 22, 1008-1011.
4. Facklam R. (1972). Appl. Microbiol. 23, 1131-1139.
5. Facklam R. et al (1974). Appl. Microbiol. 27, 107-113.
6. Swan A. (1954). J. Clin. Path. 7, 160-163.
7. Facklam R. (1973). Appl. Microbiol. 26, 138-145.
8. Wasilauskas B. L. (1971). Appl. Microbiol. 21, 162-163.
9. Lindell S. S. and Quinn P. (1975). J. Clin. Microbiol. 1, 440-443.
10. Chan P. C. K. and Porschen R. K. (1977). J. Clin. Microbiol. 6, 528-529.