



Contact Slide 5

VRBG Agar + Neutralizing / Bile Esculin Agar + Neutralizing

Flex Dip-slide with selective media for detection of Enterobacteriaceae and enterococci.

DESCRIPTION

Contact Slide 5 is a ready-to-use device with two different media coated onto a plastic support used for the microbial monitoring of surfaces and liquids even in the presence of residues of disinfectants.

Violet Red Bile Glucose agar allows the isolation and enumeration of Enterobacteriaceae. Bile Esculin agar is used for the differentiation and isolation of enterococci (group D streptococci).

TYPICAL FORMULA

VRBG Agar + Neutralizing Side 1	(g/l)	Bile Esculin Agar + Neutralizing Side 2	(g/l)
Enzymatic Digest of Animal Tissues	7.0	Enzymatic Digest of Gelatin	5.0
Yeast Extract	3.0	Beef Extract	3.0
Glucose	10.0	Esculin	1.0
Bile Salts No. 3	1.5	Ox-bile (Oxgall)	40.0
Sodium Chloride	5.0	Ferric Citrate	0.5
Neutral Red	0.03	Agar	15.0
Crystal Violet	0.002	Neutralizing	*
Agar	15.0	Final pH 7.2 ± 0.2	
Neutralizing	*		
Final pH 6.7 ± 0.2			

*Histidine, 1.0 Lecithin, 0.7 Tween 80, 5.0 Sodium Thiosulfate, 0.5

METHOD PRINCIPLE

VRBG Agar + Neutralizing includes Bile Salts and Crystal Violet as selective agents to inhibit Gram-positive cocci and allowing Gram-negative organisms to grow. Neutral red is the pH indicator incorporated to show acid production.

Bile Esculin Agar + Neutralizing contains Ox-bile which inhibits the growth of numerous accompanying bacteria. The tolerance to bile along with the hydrolysis of esculin are distinctive characteristics for enterococci.

TEST PROCEDURE

1. Unscrew and extract the slide from its cylindrical container. Avoid any contact with the agar surface.
2. For surfaces monitoring, flex the cap forming a 90° angle and press each side of the slide firmly against the surface to be examined for 10 seconds. Alternatively, use a swab for sampling the area, afterwards roll the swab gently over the agar surface.
For examination of liquids, hold the slide by the cap and immerse it completely into the test fluid.
3. Reinsert the slide into its tube, screw it tight and incubate at 37 ± 1°C for 24-48 h. **Note:** different incubation temperatures and times may be required depending on the environment and organisms under investigation.

RESULTS INTERPRETATION

Enterobacteriaceae ferment glucose forming pink to red or purple colonies (with or without precipitation haloes) on VRBG Agar + Neutralizing (**Side 1**). On Bile Esculin Agar + Neutralizing (**Side 2**), a blackening of the medium around the colonies caused by esculin hydrolysis indicates the presence of enterococci.

APPEARANCE

Side 1. Very slightly to slightly opalescent, reddish-purple

Side 2. Slightly opalescent, dark-amber to olive green.

STORAGE CONDITIONS

10-25°C away from light, until the expiry date on the label. Eliminate if signs of deterioration or contamination are evident.

SHELF LIFE

9 months

QUALITY CONTROL

Slides are inoculated with the microbial strains indicated in the QC table.

Inoculum for productivity: 50-100 CFU.

Inoculum for selectivity: 10^4 - 10^6 CFU.

Incubation conditions: $37 \pm 1^\circ\text{C}$ for 24-48 h.

QC Table.

Microorganism		Growth on Side 1	Growth on Side 2
<i>Escherichia coli</i>	ATCC® 25922	Good, pink to red or purple colonies	Inhibited
<i>Staphylococcus aureus</i>	ATCC® 25923	Partially to completely inhibited	Inhibited
<i>Enterococcus faecalis</i>	ATCC® 19433	Inhibited	Good, blackening
<i>Pseudomonas aeruginosa</i>	ATCC® 27853	Good	Inhibited

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used by properly trained operators only.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulation in force.

BIBLIOGRAPHY

- ISO 21528-1:2017. Microbiology of the food chain -- Horizontal method for the detection and enumeration of Enterobacteriaceae -- Part 1: Detection of Enterobacteriaceae.
- ISO 21528-2:2017. Microbiology of the food chain -- Horizontal method for the detection and enumeration of Enterobacteriaceae -- Part 2: Colony-count technique.
- ISO 18593:2004. Microbiology of food and animal feeding stuffs- Horizontal method for sampling techniques from surfaces using contact plates and swabs.
- ISO 7899-2:2000. Water quality – Detection and enumeration of intestinal enterococci – Part 2: Membrane filtration method.
- Marshall R.T. ed. (1993). Standard methods for the examination of dairy products, 16th ed. American Public Health Association, Washington, D.C.
- Facklam R.R. and M. Moody (1970) Presumptive identification of group D streptococci: the bile-aesculin test. *App. Microbiol.* 20:245-250.
- Isenberg H.D. and D. Goldber (1970) Laboratory studies with a selective *Enterococcus* medium. *Appl. Microbiol.* 20:433-436
- Slanetz L.W. and C.H. Bartley (1957) Numbers of enterococci in water, sewage and faeces determined by the membrane filtration technique with an improved medium. *J. Bact.* 74:591-595.

PRESENTATION	Packaging	Ref.
Contact Slide 5	20 slides	525312
Contact Slide 5	120 slides	53531

TABLE OF SYMBOLS

LOT Batch code	 Keep away from sunlight	 Manufacturer	 Use by	 Fragile, handle with care
REF Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse



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