HiCrome™ VRE Agar Base, Modified

M1925

Intended Use:

Recommended for selective isolation and differentiation of Vancomycin Resistant *Enterococcus faecalis* and *Enterococcus faecium* from clinical specimens.

Composition**

Ingredients	g / L
Peptone special	20.000
Chromogenic mixture	3.600
Sodium chloride	5.000
Arabinose	10.000
Phenol red	0.100
Agar	15.000
Final pH (at 25°C)	7.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 53.70 gram in 1000 ml purified/ distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Cool to 45-50°C and aseptically add the rehydrated contents of two vials of VF Selective Supplement (FD277). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Enterococci are the common habitants of the normal flora residing in the intestines of mammals (1). Vancomycin Resistant Enterococci are the group of Enterococci that have developed resistance towards many antibiotics particularly vancomycin. Enterococcal infections that result in human disease can be fatal, particularly those caused by strains of vancomycin-resistant enterococci (VRE) (2). Early detection of VRE is important to prevent the emergence of vancomycin resistant in *Enterococcus faecalis* .

VRE can be transmitted from person to person, especially in a hospital or chronic-care facility. Microscopic amounts of fecal material from an infected or colonized patient can contaminate the hospital environment and be a reason for the spread of infection. There are many traditional media for the detection of VRE which includes Vancomycin Resistant Enterococci Broth Base/ Agar or Bile Esculin Agar supplemented with vancomycin.

Peptone special in the medium supplies nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other necessary nutrients required for the growth of microorganisms. Sodium chloride maintains the osmotic balance. Phenol red is the pH indicator and arabinose is the fermentable carbohydrate *Enterococcus* species possess the enzyme β-glucosidase which cleaves the chromogenic substrate in the medium to produce blue coloured colonies. *Enterococcus faecium* ferments arabinose and cleaves the substrate thereby producing green colonies with yellow background. *Enterococcus faecalis* does not ferment arabinose thereby producing blue colonies due to cleavage of chromogenic substrate. The supplement added to the medium allows the selective isolation of Vancomycin Resistant Enterococci. This medium can be inoculated directly from screening swab, isolated colony prepared as a liquid suspension approximately equivalent to 0.5 McFarland turbidity.

Type of specimen

Clinical samples - faecal, urine, etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Some intermediate strains may show poor growth due to nutritional variations and resistance to Vancomycin.
2. Slight colour variation may be observed depending upon the utilization of the substrate by the organism.
3. Further confirmation must be carried out by sensitivity testing.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pinkish beige homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Red coloured, opaque gel forms in Petri plates

Reaction

Reaction of 5.37% w/v aqueous solution at 25°C. pH : 7.8±0.2

pH

7.60-8.00

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C with added VF Selective Supplement (FD277) for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Enterococcus faecalis (VRE) ATCC 51299	50-100	luxuriant	>=50%	blue
Enterococcus faecium (VRE) ATCC 700221	50-100	luxuriant	>=50%	green with yellow background
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	0%	
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	>=10^4	inhibited	0%	

Key: (*) Corresponding WDCM numbers

Storage and Shelf Life

Store between 15-25°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1.Mara D., Horan NJ: The Handbook of water, wastewater and microbiology, Amsterdam, The Netherlands, Academic Press; 2003.
2.Mascini EM, Bonten MJ: Vancomycin- resistant enterococci: consequences for therapy and infection control. Clin Microbiol Infect.2005,11 (Suppl.4):43-56.
3.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.

4.Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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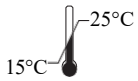
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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