HiCrome™ VRE Agar Base, Modified

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

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone special</td>
<td>20.000</td>
</tr>
<tr>
<td>Chromogenic mixture</td>
<td>3.600</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Arabinose</td>
<td>10.000</td>
</tr>
<tr>
<td>Phenol red</td>
<td>0.100</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td><strong>Final pH (at 25°C)</strong></td>
<td>7.8±0.2</td>
</tr>
</tbody>
</table>

**Directions**
Suspend 53.70 grams in 1000 ml 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 HiCrome™ VRE Agar 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 faecalis* 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

**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 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 HiCrome™ VRE Agar Supplement (FD277) for 24-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
<th>Inoculum (CFU)</th>
<th>Recovery</th>
<th>Colour of Colony</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterococcus faecalis (VRE) luxuriant ATCC 51299</td>
<td>50-100</td>
<td>&gt;=50%</td>
<td>blue</td>
<td></td>
</tr>
<tr>
<td>Enterococcus faecium (VRE) luxuriant ATCC 700221</td>
<td>50-100</td>
<td>&gt;=50%</td>
<td>green with yellow background</td>
<td></td>
</tr>
<tr>
<td>Enterococcus faecalis ATCC inhibited 29221 (00087*)</td>
<td>&gt;=10³</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)</td>
<td>&gt;=10³</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: (*) Corresponding WDCM numbers

Storage and Shelf Life
Store dehydrated powder and prepared medium on receipt at 2-8°C. Use before expiry period 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. Use before expiry date on the label. Product performance is best if used within stated expiry period.


Please refer disclaimer Overleaf.
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

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