Brilliance™ VRE
Detection of Vancomycin Resistant Enterococci (VRE)

Brilliance™ VRE Agar is a chromogenic screening plate for the detection of Vancomycin Resistant Enterococci (VRE). The medium provides presumptive identification of Enterococcus faecium and Enterococcus faecalis, direct from clinical samples.

Saves Time
- Presumptive identification of vancomycin resistant E. faecium and E. faecalis in 24 hours, direct from sample

Convenient & Easy to Use
- Quick and easy screening test, ready-to-use plates with a new semi-opaque background
- Clear differentiation of E. faecium and E. faecalis colonies
- Direct inoculation from faecal sample, swab, isolate or suspension

Selective
- Inhibition of intrinsically resistant E. casseliflavus and E. gallinarum, reduces incidence of false-positive results compared to traditional media, minimising confirmatory testing

Reduces Cost
- Early presumptive identification of E. faecium and E. faecalis allows for appropriate treatment and infection control procedures to be adopted earlier, improving treatment outcomes and the effectiveness of infection control measures

Differentiation of vancomycin resistant E. faecium from E. faecalis is achieved through the inclusion of two chromogens that are targeted by specific enzymes: phosphatase and α-galactosidase. The action of these enzymes on the chromogens results in a build-up of colour within the colony. The colour produced depends on which enzymes the organisms possess. The presence of phosphatase enzymes in both E. faecium and E. faecalis results in a light blue colony, however, E. faecium also produces α-galactosidase, resulting in a mix of blue and pink chromophores within the bacterium producing indigo to purple colonies, which are easily distinguished from the light blue E. faecalis colonies.

Additional antibiotics, in combination with vancomycin, are present to suppress the growth of competing flora including E. gallinarum and E. casseliflavus, both of which are intrinsically resistant to vancomycin, possessing the chromosomally encoded VanC resistance mechanism.

The VanC resistance mechanism is not readily transmissible between organisms and as such is deemed less clinically significant than VanA and VanB mechanisms which are encoded on freely transmissible genetic elements, plasmids and transposons, thus increasing the risk of resistance genes spreading to other organisms.

References:
4. Data on file at Oxoid, based on growth or inhibition.
Performance
Vancomycin Resistant Enterococci (VRE) have recently emerged as nosocomial pathogens, due to the increased use of vancomycin for treatment of meticillin-resistant Staphylococcus aureus in the United States of America and use of a vancomycin-like glycopeptide (avoparcin) as a growth promoter in animal husbandry in Europe.

In the U.S.A., the Centers for Disease Control and Prevention reported that as many as 1 in 3 infections amongst intensive care patients were caused by VRE. Early detection of VRE is important for infection control and prevention measures, epidemiological infectious disease follow-up, and also prevention of vancomycin resistant Staphylococcus aureus emergence.

Oxoid Brilliance VRE Agar was evaluated at a clinical trial site, using a panel of 120 well-characterised, stored clinical isolates. Brilliance VRE Agar gave a sensitivity of 94.7% and 100% at 24 and 48 hours respectively, with the trial site reporting that it was able to detect more positives at 24 hours than with the competitor chromogenic agar currently in use.

In a separate internal evaluation, using a panel of 79 non VRE strains, Brilliance VRE Agar was 100% selective compared to a competitor media, which achieved selectivity of 94%.

Oxoid Brilliance VRE Agar is for in vitro diagnostic use only, by trained microbiologists. It must not be used beyond its stated expiry date, or if the product shows any signs of deterioration. Identiﬁcations are presumptive and should be conﬁrmed.

Screening Procedure
Inoculate Brilliance VRE plate directly with pea sized bead or loopful of specimen.

OR

Pre-enrich in suitable selective broth prior to inoculation onto a Brilliance VRE plate. Use an incubation protocol appropriate to the broth chosen.

Indigo to Purple
E. faecium

Light Blue
E. faecalis

POSITIVE

NEGATIVE

Inoculate plates at 37°C for 24hr

Negative plates should be re-incubated for an additional 24 hours

For more information about the Thermo Scientific Brilliance range of chromogenic media and other products, please visit www.thermoscientific.com/microbiology or talk to your local representative.

Oxoid Brilliance Agar Ready-Poured Plates

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<tr>
<th>Description</th>
<th>Packaging</th>
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</thead>
<tbody>
<tr>
<td>Brilliance VRE Agar</td>
<td>10x90mm plates</td>
<td>P01175A</td>
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Other Products in the Brilliance Resistance Screening Range

<table>
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<th>Description</th>
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</thead>
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<tr>
<td>Brilliance MRSA 2 Agar (UK)</td>
<td>10x90mm plates</td>
<td>P01210A</td>
</tr>
<tr>
<td>Brilliance MRSA 2 Agar (rest of Europe)</td>
<td>10x90mm plates</td>
<td>P05310A</td>
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<tr>
<td>Brilliance ESBL Agar</td>
<td>10x90mm plates</td>
<td>P05302A</td>
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The Oxoid product range offers the complete solution for all your VRE screening and testing needs.

Culti-Loops™

- Positive Control Strain
  - Enterococcus faecalis (Vancomycin Resistant) ATCC® 51299™†
    - CL.1996
- Negative Control Strains
  - Enterococcus faecium ATCC® 35667™†
    - CL.1956
  - Enterococcus faecalis ATCC® 19433™†
    - CL.1990
  - Enterococcus gallinarum ATCC® 700425™†
    - R4601958

Confirmatory Tests

- Thermo Scientific™ RapID™ STR Rapid identification of streptococci and enterococci
- Streptococcus Grouping Kit
  - 50 tests DR0585A
- O.B.I.S. PYR
  - 60 tests ID0580M

Antimicrobial Susceptibility Testing M.I.C. Evaluator Strips

- M.I.C. Evaluator™ Strips
  - For the accurate determination of the minimum inhibitory concentration (MIC) of a test organism to an antimicrobial
  - Vancomycin 256 - 0.016μg/mL
    - 10 strips MA0102D
  - Vancomycin 256 - 0.016μg/mL
    - 50 strips MA0102F

Discs

- Antimicrobial susceptibility testing discs for use with appropriate AST media in accordance with CLSI M44-A.
  - Vancomycin 5µg Discs
    - 5x50 discs CT0188B
  - Vancomycin 30µg Discs
    - 5x50 discs CT0658B

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