Vancomycin-Resistant Enterococcus (VRE) Chromogenic Agar

Cat. 2077

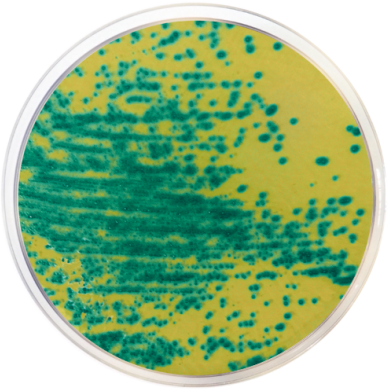
For the detection of vancomycin-resistant enterococci.

Practical information

Aplications	Categories
Detection	Enterococci

Industry: Clinical

CE IVD



Principles and uses

Vancomycin-Resistant Enterococcus (VRE) Chromogenic Agar is used to detect vancomycin-resistant enterococci.

The medium contains the necessary nutrients for the development of vancomycin-resistant enterococcus. The chromogenic substrate produces colonies which are greenish-blue in color and the inhibitors in the medium prevent the growth of accompanying flora. Vancomycin inhibits all Enterococcus faecalis susceptible to it.

Enterococci are bacteria found in the human digestive and female genital tracts, although they do not pose a threat to healthy people. Infections occur more commonly in people who are hospitalized and who may be more susceptible to infection. Health professionals use vancomycin as an antibiotic to treat infections but, upon exposure to it, some bacteria will develop vancomycin-resistance. Enterococci are particularly interesting because, as with many of their bacterial counterparts, they can resist different forms of antibiotic treatment, including vancomycin, usually the last resort for resistant infections.

Formula in g/L

Bacteriological agar	15	Sodium chloride	15
Vancomycin	0,005	Growth factors	41
Chromogenic Substrate and Inhibitors	0,477		

Typical formula g/L * Adjusted and/or supplemented as required to meet performance criteria.

Preparation

Suspend 71,5 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until completely dissolved. AVOID OVERHEATING. DO NOT AUTOCLAVE. Cool to 45-50 ºC, mix well and dispense into plates.

Instructions for use

For clinical diagnosis, use any type of sample of clinical origin.
- Inoculate on the surface and incubate in aerobic conditions at 35±2 ºC for 18-24 h.
- Reading of results.

Quality control

Solubility	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige	Amber, slightly opalescent	7,1±0,2

Microbiological test

Incubation conditions: (35±2 ºC / 18-24 h).

Microorganisms	Specification	Characteristic reaction
Klebsiella aerogenes ATCC 13048	Total inhibition	
Salmonella typhimurium ATCC 14028	Total inhibition	
Enterococcus faecalis ATCC 19433	Total inhibition	
Enterococcus faecium ATCC 19434	Total inhibition	
Escherichia coli ATCC 25922	Total inhibition	
Staphylococcus aureus ATCC 25923	Total inhibition	
Enterococcus faecalis ATCC 29212	Total inhibition	
Enterococcus faecalis ATCC 33186	Total inhibition	
Enterococcus faecalis ATCC 51299	Good growth	Greenish-blue colonies

Storage

Temp. Min.:2 ºC
Temp. Max.:8 ºC

Bibliography

Levin, Fischer and Cabelli. 1975. Appl. Microbiol. 30.66.
U.S. Environmental Protection Agency. 2002. Method 1600: Enterococci in water by membrane filtration using membrane enterococcus indoxyl –D-glucoside agar (mEI]. Publication EPA-821- R-02-022. USEPA Office of Water, Office of Science and Technology, USEPA, Washington, DC.
NIH. National Institute of Allergy and Infectious Diseases.