

HiCrome™ Enterococci Agar / Broth

Recommended for the identification and differentiation of Enterococci from water samples.

M1414 /
M1376

Composition **

	M1414	M1376
Ingredients	Grams/Litre	Grams/Litre
Peptone, special	10.00	10.00
Sodium chloride	5.00	5.00
Sodium azide	0.30	0.30
Chromogenic substrate	0.06	0.040
Polysorbate 80 (Tween 80)	2.00	2.00
Disodium hydrogen phosphate	1.25	1.25
Agar	15.00	-

Final pH (at 25°C) 7.5 ± 0.2

** Formula adjusted, standardized to suit performance parameters

Directions

Suspend 33.61 gm of M1414 and 18.59 grams (single strength) or 37.18 grams (double strength) of M1376 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour/dispense into sterile Petri plates / tubes.

Principle and Interpretation

HiCrome™ Enterococci media are formulated on the basis of the work carried out by Althous et al (1), Amoras (2), Litsky et al (3), and Manafi and Sommer (4) and Snyder and Lichstein (5). These media are recommended for the rapid detection of Enterococci from water samples. The presence of *Enterococcus* group, which is a subgroup of the faecal streptococci, serves as a valuable bacterial indicator for determining the extent of faecal contamination (1, 6) and it is more specific than the detection of coliforms, which may originate from non-faecal sources. The enzyme β -glucosidase produced by Enterococci cleaves the chromogenic substrate, resulting in a bluish green colour. The medium contains peptone special, which provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients. Sodium chloride maintains the osmotic balance of the medium. Sodium azide inhibits the accompanying microflora, especially gram-negative organisms. Polysorbate 80 (Tween 80) acts as a source of fatty acids.

Type of specimen

Water samples

Specimen Collection and Handling

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (7). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

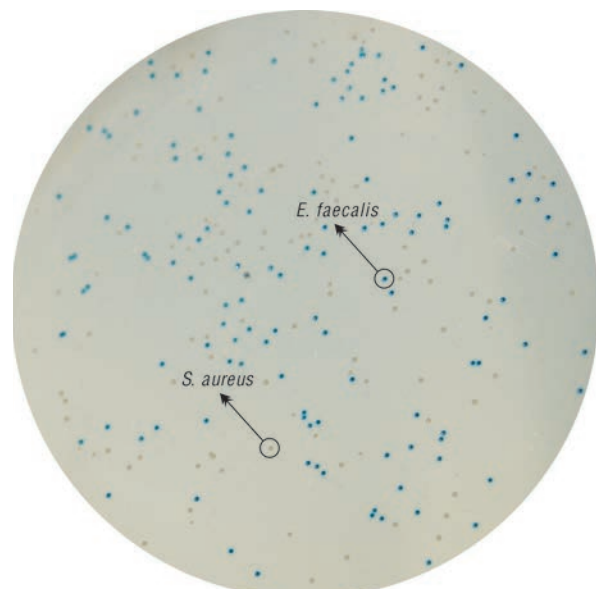
Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety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

Limitations

1. Some species may show poor growth due to nutritional variations.
2. Slight colour variation may be observed depending upon the utilization of the substrate by the organism.

Performance and Evaluation

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



M1414 – HiCrome™ Enterococci Agar

HiCromeVeg™ Freedom from BSE / TSE worries
Single Streak Rapid Differentiation Series

HiCrome™ Enterococci Broth (M1376) is also available as HiCrome™ Enterococci HiVeg™ Broth (MV1376) wherein all the animal origin nutrients have been replaced by vegetable based nutrients

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Quality Control

- Appearance of Powder** : Cream to yellow coloured, homogeneous, free flowing powder.
- Gelling** : Firm, comparable with 1.5% Agar gel of M1414.
- Colour and Clarity of prepared medium** : Light amber coloured, clear to slightly opalescent gel forms in Petri plates / clear solution in tubes.
- Reaction** : Reaction of 3.36% w/v of M1414 and 1.86% w/v of M1376 aqueous solution at 25°C. pH:7.5 ± 0.2.
- Cultural Response** : Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism (ATCC)	Inoculum (CFU)	Growth	Recovery on M1414	Colour of colony (M1414)/	Colour of Medium (M1376)
<i>Enterococcus faecalis</i> (29212) (00087*)	50-100	good	40-50%	blue green	light blue-green
<i>Staphylococcus aureus subsp aureus</i> (25923) (00034*)	50-100	good	40-50%	colourless	light yellow
<i>Escherichia coli</i> (25922) (00013*)	50-100	none to poor	≤10%	-	light yellow
<i>Pseudomonas aeruginosa</i> (27853) (00025*)	50-100	none to poor	≤10%	-	light yellow

Key : * = corresponding WDCM Numbers

Storage and Shelf-life

Store between 2-8°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. Use before expiry date on the label.

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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (8, 9).

References

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5. Snyder M.L., and Lichstein, H.C. 1940, J. Infect. Dis. 67. 113-115.
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