

CM 21483 – RAPID ENTEROCOCCI AGAR

INTENDED USE

For rapid and easy identification and differentiation of Enterococci from water.

PRODUCT SUMMARY AND EXPLANATION

Enterococci are commonly found in the faeces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to faecal pollution, the presence of Enterococci in water is an indication of faecal pollution and the possible presence of enteric pathogens. The Enterococci test is recommended as a measure of ambient fresh and marine recreational water quality. Epidemiological studies have led to the development of criteria which can be used to promulgate recreational water standards based on established relationships between health effects and water quality. The significance of finding Enterococci in recreational fresh or marine water samples is the direct relationship between the density of Enterococci and the risk of gastrointestinal illness associated with swimming in water. The Rapid Enterococci Agar allows for rapid identification and differentiation of Enterococci from water samples.

COMPOSITION

Ingredients	Gms / Ltr
Peptone, special	10.000
Sodium chloride	5.000
Sodium azide	0.300
Chromogenic mixture	0.060
Polysorbate 80 (Tween 80)	2.000
Dipotassium hydrogen phosphate	1.250
Agar	15.000

PRINCIPLE

This medium consists of peptone special which supplies nitrogenous, carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients. Sodium chloride provides the osmotic balance for rapid growth of Enterococci. Sodium azide inhibits the accompanying microflora, especially the gram-negative organisms. The enzyme β -D-glucosidase present in Enterococci cleaves the chromogenic substrate, resulting in a blue green colour of the colonies.

INSTRUCTION FOR USE

Dissolve 33.61 grams in 1000 ml purified/distilled water.
Heat to boiling to dissolve the medium completely.
Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
Mix well and pour into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.5 ± 0.2



INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	None to poor	0-10%	-	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Good	40-50%	Blue-green	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	None to poor	0-10%	-	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Good	40-50%	Colourless	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C. Wast
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.
4. Litsky W., Mallmann W. L., a Fifiield C. W., 1953, Am. J. Pbl. Hlth., 43:873.
5. Manafi M., Sommer R., 1993, Wat. Sci. Tech. 27:271-274.

