



## Water Detect Enterococci

Medium for detection of enterococci in water.

### INTENDED PURPOSE

Medium used for the presumptive identification of enterococci in the microbiological monitoring of water quality. This medium is not intended for use in the diagnosis of disease or other conditions in humans.

### DESCRIPTION

Enterococci are a bacteriological indicator of fecal contamination in water. They can be included in a water monitoring program to assess quality of recreational and drinking water concerning potential risk to human health from fecal pathogens. Water Detect Enterococci allows the identification of *Enterococcus* species based on esculin hydrolysis.

### TYPICAL FORMULA\*

	(g/litre)
Peptone	3.0
Tryptone	17.0
Sodium Chloride	5.0
Yeast Extract	5.0
Esculin	1.0
Ferric Ammonium Citrate	0.5
Selective Mix	10.15
Final pH 7.0 ± 0.2 at 25°C	

\*Adjusted and/or supplemented as required to meet performance specifications.

### METHOD PRINCIPLE

Peptones provide amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Yeast extract is a source of amino acids and vitamins of group B. Esculin is a glucoside which is hydrolysed by *Enterococcus* spp. to form aesculetin and dextrose. Aesculetin combines with ferric citrate in the medium to form a dark brown or black complex which is indicative of a positive result. Selective mix inhibits Gram-negative bacteria and Gram-positive bacteria other than enterococci.

### MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as: Sterile bottle for water collection, inoculating loops, incubator, quality control organisms.

### PREPARATION

Each tube/bottle of Water Detect Enterococci contains pre-weighted powder. The powder is suspended using the water sample as outlined below.

### TEST PROCEDURE

Take a tube of Water Detect Enterococci and transfer the whole content into a bottle with 100 ml of the sample.

For the use of bottles, add directly 100 ml of the sample to a bottle of Water Detect Enterococci.

Shake the tube/bottle to dissolve the powder completely.

Incubate at 35 ± 2°C for 18-24 h.

### INTERPRETING RESULTS

The presence of *Enterococcus* spp. is indicated by a blackening of the medium.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

**SHELF LIFE**

2 years.

**QUALITY CONTROL**

**Appearance of Dehydrated Medium:** Free-flowing, homogeneous, greenish, light to medium beige.

**Appearance of Prepared Medium:** Slightly greenish, dark amber.

**Expected Cultural Response:**

Control strain		Inoculum	Incubation	Criteria
<i>Enterococcus faecalis</i>	ATCC® 19433	≤100 CFU	18-24 h / 35 ± 2°C	Good growth, blackening of the medium (positive esculin reaction)
<i>Escherichia coli</i>	ATCC® 25922	>10 <sup>3</sup> CFU		
<i>Staphylococcus aureus</i>	ATCC® 25923			Inhibition

Please refer to the actual batch related Certificate of Analysis (CoA).

**PERFORMANCE CHARACTERISTICS**

Performance testing of Water Detection Enterococci was carried out using the QC strains listed above. The results obtained met the established criteria.

**LIMITATIONS**

Invalid results can be caused by poor specimen quality, improper sample collection, improper transportation, improper laboratory processing, or a limitation of the testing technology. The operator should understand the principles of the procedures, including its performance limitations, in advance of operation to avoid potential mistakes.

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium. Some strains of *Listeria monocytogenes* may cause a darkening of the medium which can lead to false positive results.

**WARNING AND PRECAUTIONS**

**For professional use only.** Operators must be trained and have certain experience. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

**DISPOSAL OF WASTE**

Disposal of waste must be carried out according to national and local regulations in force.

**BIBLIOGRAPHY**

See the references at the end of this document.

**TABLE OF SYMBOLS**

See the table of symbols at the end of this document.

**ORDER INFORMATION**

Product	Format	Packaging	Ref.
Water Detect Enterococci	Dehydrated media	12 tubes	630603
		12 bottles	630604

## Revision History

Revision	Release Date	Change Summary
0	2024-10-02	Document creation
1	2024-12-13	Added new packaging
2	2025-03-19	Updated LIMITATIONS

This IFU document and the SDS are available from the online Support Center:

[liofilchem.com/ifu-sds](https://liofilchem.com/ifu-sds)

## References

1. Swan, A. 1954. The use of bile-esculin medium and of Maxted's technique of Lancefield grouping in the identification of enterococci (group D streptococci). *J. Clin. Pathol.* 7:160.
2. Facklam, R. R., and M. D. Moody. 1970. Presumptive identification of group D streptococci: the bileesculin test. *Appl. Microbiol.* 20:245.
3. Rochaix, A. 1924. Milieux a leculine pour le diagnostid differentiel des bacteries du grojps strepto enteropneumocoque. *Comt. Rend. Soc. Biol.* 90:771-772.
4. Meyer, K., and H. Schönfeld. 1926. Über die Unterscheidung des Enterococcus vom Streptococcus viridans und die Beziehung der beider zum Strptococcus lactis. *Zentralb. Bakteriol Parasitenkd. Infektionskr. Hyg. Abt. I orig.* 99:402-416.
5. Schleifer, K. H., and R. Kilpper-Balz. 1987. Molecular and chemotaxonomic approaches to the classification of streptococci, enterococci and lactococci: a review. *Syst. Appl. Microbiol.* 10:1-19.
6. Vanderzant, C., and D. F. Splittstoesser (eds.). *Compendium of methods for the microbiological examination of foods*, 4th ed. American Public Health Association, Washington, D.C.
7. Marshall, R. T. (ed.). 2004. *Standard methods for the examination of dairy products*, 17th ed. American Public Health Association, Washington, D.C.

## Table of Symbols

	Batch code
	Catalogue number
	Manufacturer
	Use by
	Fragile, handle with care
	Temperature limitation
	Contains sufficient for <n> tests
	Consult instructions for use
	Do not reuse
	Keep away from sunlight



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