Technical Data Sheet

Kanamycin Esculine Azide Agar

Ordering number: 1.05222.0500

For the isolation, differentiation and enumeration of enterococci in foodstuffs, water and other materials according to MOSSEL et al. (1978).

Kanamycin esculin azide agar is, unlike culture media containing bile which sometimes exhibit a fluctuating selectivity towards D-streptococci, always highly selective for this group of bacteria.

Mode of Action

Kanamycin and azide largely inhibit the accompanying bacterial flora. D-streptococci are, however, only slightly sensitive to these substances, so they can grow almost normal and hydrolyse the glucoside esculin to give glucose and esculetin. Esculetin forms an olive green to black complex with iron(III) ions.

Typical Composition (g/L)

Kanamycin Esculine Azide Agar	
Peptones from casein	20.0
Yeast extract	5.0
Sodium chloride	5.0
Sodium citrate	1.0
Sodium azide	0.15
Kanamycin sulfate	002
Esculin	1.0
Ammonium iron(III) citrate	0.5
Agar-agar**	15.0

**Agar-agar is equivalent to other different terms of agar.

Preparation

Suspend 47.5 g/litre, autoclave (15 min at 121 °C), and pour plates.

Do not overheat.

pH: 7.1 ± 0.2 at 25 °C.

The plates are clear and brown-bluish.

Experimental Procedure and Evaluation

Inoculate by spreading the samples on the surface of the plates.

Incubation: up to 3 days at 35 °C or 42 °C aerobically. The higher temperature increases the selectivity of the medium.

Enterococci colonies are surrounded by a dark zone. Confirmatory tests, e.g. catalase test, glucose utilisation and growth at 45°C ± 1 °C, may be carried out.

Quality Control

Control strains	Recovery	Colour change to olivegreen-black
Enterococcus faecalis ATCC 11700	≥ 70 %	+
Enterococcus hirae ATCC 8043 (WDCM 00089)	≥ 70 %	+
Enterococcus durans ATCC 6056	≥ 70 %	+
Staphylococcus aureus ATCC 6538-P (WDCM 00033)	No limit	-
Bacillus cereus ATCC 11778 (WDCM 00001)	≤ 0.01 %	-
Escherichia coli ATCC 11775 (WDCM 00090)	≤ 0.01 %	-

Please refer to the actual batch related Certificate of Analysis.

A recovery rate of 50 % is equivalent to a productivity value of 0.5.

Enterococcus faecalis ATCC 29212

Streptococcus pyrogenes ATCC 19615

Literature

BRANDL, E., ASPERGER, H., PFLEGER, F., u. IBEN, CH.: Zum Vorkommen von D-Streptokokken in Käse. - **Arch. Lebensmittelhyg., 36**; 18-22 (1985).

MOSSEL, D.A.A., BIJKER, P.G.H., a. EELDERING, J.: Streptokokken der Lancefield-Gruppe D in Lebensmitteln und Trinkwasser - Ihre Bedeutung, Erfassung und Bekämpfung. - **Arch. f. Lebensmittelhyg., 29**; 121-127 (1978).

Ordering Information

Product	Cat. No.	Pack size
Kanamycin Esculine Azide Agar	1.05222.0500	500 g

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