Technical Data Sheet

Kanamycin Esculine Azide Agar — Code 85838.0500

Also known as
Kanamycin Aesculin Azide Agar

Intended use
For the isolation, differentiation and enumeration of enterococci in foodstuffs, water and other materials.

Formula * - Composition in g/L
Peptones from casein……....20.0
Yeast extract ……..…… 5.0
Sodium chloride…….... 5.0
Sodium citrate …… 1.0
Sodium azide..... 0.15
Kanamycin sulfate…….…… 0.02
Esculin ……..…… 1.0
Ammonium iron (III) citrate …… 0.5
Agar ……..…….. 10.0

* Adjusted and/or supplemented as required to meet performance criteria

Final pH 7.0 ± 0.2 at 25 °C.

Instructions for preparation
Dissolve 42.7 g in 1 L of purified water by bringing to the boil with frequent agitation.
Sterilise in the autoclave at 121°C for 15 minutes.

Principle of the method and general information
Kanamycin Esculine Azide Agar is prepared according to the typical formulation described by Mossel et al. It is recommended for the detection of enterococci in foodstuffs water and other materials. The medium contains kanamycin sulphate and sodium azide as inhibitory compounds and an indicator system (aesculin, ferric ammonium citrate) to detect the aesculin-hydrolysing bacteria. The enterococci will grow on the medium with grey colonies surrounded by a brown-black zone.

Instruction for use
For laboratory use only.
- Prepare tenfold dilutions of sample with the appropriate diluent.
- Within 3 hours from the sample preparation, spread 0.1ml of the inoculum onto the plates.
- Incubate aerobically at 35°C or at 42°C for up to 3 days (the higher incubation temperature increases the selectivity of the medium).
- Enterococci colonies are round, grey, about 2 mm in diameter surrounded by a brown-black zone.

Confirmatory tests, e.g. catalase test, glucose utilization and growth at 45°C ± 1 °C, may be carried out.

Quality Control:
Physical characteristics:

Appearance of powder	Beige, fine, homogeneous, hygroscopic powder.
Appearance of prepared medium	Tan with trace blue cast, limpid.
pH (25°C)	7.1 ± 0.2

Microbiological characteristics:

Test Strains	Incubation T° / t / At.	Inoculation method	Growth characteristics	Productivity rate
E .faecalis ATCC 19433	37 °C / 24 h / AE	QT ≤ 100 CFU	Good growth, grey colonies with brown halo	PR ≥ 0.7
E. faecium ATCC 19434	37 °C / 24 h / AE	EC	Good growth, grey colonies with brown halo	
E. hirae ATCC 8043	37 °C / 24 h / AE	EC	Good growth, grey colonies with brown halo	

VWR International bvba/sprl
Haasrode Research park Zone 3
Geldenaaksebaan 464
b-3001 Leuven Tel +32 (0) 16 385 011

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E. durans CB 6/409	37 °C / 24 h / AE	EC	Good growth, grey colonies with brown halo
E. coli ATCC 25922	37 °C / 24 h / AE	MM	Growth inhibited
S. bovis ATCC 9809	37 °C / 24 h / AE	MM	Growth inhibited
B. cereus ATCC 9809	37 °C / 24 h / AE	MM	Growth inhibited
S. aureus ATCC 25923	37 °C / 24 h / AE	MM	Growth inhibited
B. subtilis ATCC 6633	37 °C / 24 h / AE	MM	Growth inhibited

Notes
PR (Productivity Ratio): CFU obtained on the culture medium under test / CFU obtained on the Reference Batch
Incubation atmosphere AE: aerobic incubation
Inoculation method QT : quantitative surface plating method; EC: semi-quantitative, ecometric technique; MM: modified Miles-Misra surface drop method
ATCC is a registered trade mark of American Type Culture Collection

Reference

Mossel, D.A.A., Bijker, P.G.H., Eeldering, I. Streptokokken der Lancefield-Gruppe D in Lebensmitteln und Trinkwasser - Ihre Bedeutung, Erfassung und Bekämpfung. - Arch. f. Lebensmittelhyg., 29; 121-127 (1978).

Storage conditions

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+10 ºC to 30 ºC and
<60% RH).

Ordering information

85838.0500	Kanamycin Esculine Azide Agar	Bottle of 500 g

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