

PRODUCT CODE: 413792

Nutrient Agar (ISO 6579, ISO 10273, ISO 19250)(Dehydrated Culture Media) for microbiology

Preparation

Suspend 23 grams of the medium in one litre of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes. The prepared medium should be stored at 8-15°C.

The colour is amber, slightly opalescent. The dehydrated medium should be homogeneous, free-flowing and beige in colour. If there are any physical changes, discard the medium.

Uses

NUTRIENT AGAR is a general-purpose medium, not selective but suitable for the cultivation of a wide variety non-fastidious microorganisms. It can be used as a colony count medium in sanitation, medical and industrial bacteriology. There are many uses for Nutrient Agar in the bacteriological analysis of drinking water, wastewater, milk and other foods.

The American Public Health Association (APHA) suggested the formula of Nutrient Agar as a standard culture medium used in water testing. It is also used in the multiplication of microorganisms to produce vaccines and antigens in general, in the tests of sensitivity and resistance, and as a base to prepare an enriched medium by adding ascitic fluid, etc. It is used to grow microorganisms and for subsequent biochemical tests. The Gelatin peptone and Beef extract provide nitrogen, vitamins, minerals and amino acids essential for growth. Bacteriological agar is the solidifying agent.

ISO 6579, ISO 19250 and ISO 10273 recommend this medium to obtain presumptive *Salmonella* and *Yersinia* isolated colonies respectively. A typical or suspicious colony from each selective medium must be seeded, and then the other four if the first one turns out to be negative.

In the case of epidemiological studies, it is recommended to identify at least five colonies. Should there be less than five typical or suspicious colonies on a plate, all the typical or suspicious colonies will be used for confirmation. Inoculate medium with the test sample and incubate at $35 \pm 2^\circ\text{C}$ for 18 – 48 hours.

Good growth will appear as translucent colonies. According ISO 19250 incubate at $36 \pm 2^\circ\text{C}$ for 24 ± 3 hours.

Composition

See in Data Sheet (TDS).

Microbiological Test

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of $35 \pm 2^{\circ}\text{C}$ and observed after 18 - 48 hours.

Microorganism	Growth
<i>Staphylococcus aureus</i> ATCC 25923	Good
<i>Escherichia coli</i> ATCC 25922	Good
<i>Salmonella typhimurium</i> ATCC 14028	Good
<i>Streptococcus pyogenes</i> ATCC 12344	Good
<i>Streptococcus pneumoniae</i> ATCC 6301	Good
* <i>Yersinia enterocolitica</i> ATCC 23715	Good

*According ISO 10273 incubate at 30°C for 24 hours.

According ISO 19250 incubate at $36 \pm 2^{\circ}\text{C}$ for 24 ± 3 hours.

According ISO 11133 24h/ 37°C (Productivity)

Microorganism	Growth	Productivity Qualitative
* <i>Yersinia enterocolitica</i> ATCC 23715	$10^3 - 10^4$	Good
<i>Escherichia coli</i> ATCC 25922	$10^3 - 10^4$	Good
<i>Salmonella typhimurium</i> ATCC 14028 1	$10^3 - 10^4$	Good
* Incubation at 30°C for 24 h		

Storage

Once opened keep powdered medium closed to avoid hydration.

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