Reference: 100692ZA **Technical Data Sheet**

Product: **Nutrient Agar**

Specification

Solid culture medium for general purpose use with less fastidious organisms according to ISO standards.

Presentation

	Packaging Details	Shelf Life	Storage
20 Prepared Plates 90 mm with: 21 ± 2 ml	1 box with 2 packs of 10 plates/pack. Single cellophane.	3 months	2-14 ºC

Composition

Composition (g/l):

Meat extract	1.00
Yeast extract	2.00
Peptone	5.00
Sodium chloride	5.00
Agar	15.0

Description /Technique

Description:

Nutrient Agar is a simple medium based on meat infusions, complemented with yeast extract to reinforce its nutrient qualities as well as its growth factors. It is most suitable for general routine work and can support the growth of common organisms, even those considered somewhat fastidious with regard to nutrient requirements. The incorporation of sodium chloride allows for the addition of Blood if necessary, even though this is not an optimal medium for very fastidious organisms.

Technique:

Collect and process sample volumes according to the specifications of directives, regulations, standards or specific protocols established depending on the objectives.
spread the plates by streaking methodology or by spiral method
Incubate the plates upside down and under aerobic conditions at 36 ± 2 ° C for 22 ± 2h.
(Incubation times longer than those mentioned above or different incubation temperatures may be reqquired depending on the sample, on the specifications,... This medium can be inoculated directly or after enrichment broth)
After incubation, enumerate all the colonies that have appeared onto the surface of the agar.
Each laboratory must evaluate the results according to their specifications.
Calculate total microbial count per ml of sample by multiplying the average number of colonies per plate by the inverse dilution factor if streaked a diluted sample. Report results as Colony Forming Unit (CFU's) per ml or g along with incubation time and temperature.

Quality control

Physical/Chemical control

Color : Yellowish pH: 7.4 ± 0.2 at 25ºC

Microbiological control

Inoculate:Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity).

Microbiological control according to ISO 11133:2014/A1:2018.

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 36 ± 2 ºC, reading at 21±3 h

Microorganism	Growth
Salmonella typhimurium ATCC® 14028, WDCM 00031	Good (≥70%)
Escherichia coli ATCC® 8739, WDCM 00012	Good (≥70%)
Ps. aeruginosa ATCC® 9027, WDCM 00026	Good (≥70%)

Sterility Control

Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

Bibliography

· ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
· DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA. Washington. DC. USA.
· EUROPEAN NORME (EN) 12780:2002 Water Quality - Detection and enumeration of *Pseudomonas aeruginosa* by membrane filtration.
· ISO 8914-1 Standard (1990) Microbiology- General guidance for the detection of *Vibrio parahaemolyticus*.
· ISO 16266 Standard (2006) Water Quality - Detection and enumeration of *Pseudomonas aeruginosa* - Method by membrane filtration.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.

Storage

Storage conditions: 2-14ºC

Alternatively the plates may also be stored at the range of 2 - 25ºC, with a proper performance of the medium, but some precautions must be taken into account:

-In the range of 2 - 8 ºC avoid direct contact with surfaces that can freeze product.

-In the range of 15 - 25 ºC, dehydration control must be taking in account.