NUTRIENT AGAR TM 341

INTENDED USE
For general cultivation of less fastidious microorganisms, can be enriched with blood.

COMPOSITION

Ingredients	Gms/Ltr
Agar	15.000
Sodium chloride	5.000
Peptone	5.000
Yeast extract	1.500
Beef extract	1.500

PRODUCT SUMMARY AND EXPLAINATION

Nutrient Agar is a basic culture media used for maintaining microorganisms, cultivating fastidious organisms by enriching with serum or blood and are also used for purity checking prior to biochemical or serological testing. Nutrient Agar has the formula originally designed for use in the Standard Method for Examination of Water and Waste water. It is also recommended to test microorganism from clinical specimen. It is one of the several non-selective media useful in routine cultivation of microorganisms. It can be used for the cultivation and enumeration of bacteria which are not particularly fastidious. Addition of different biological fluids such as horse or sheep blood, serum, egg yolk etc. makes it suitable for the cultivation of related fastidious organisms.

PRINCIPLE
Medium contains Peptone, Beef extract and Yeast extract provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium. Agar act as a solidifying agent.

INSTRUCTIONS FOR USE

1. Dissolve 28gms in 1000ml distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.
3. Sterilize by autoclaving at 15 psi (at 121°C) for 15 minutes.
4. Cool to 40-50˚C and dispense the medium as desired.

Note: If desired, the medium can be enriched with 5-10% blood or other biological fluids.

QUALITY CONTROL SPECIFICATIONS

Appearance Dehydrated powder: Cream to yellow colour, homogeneous free flowing powder
Appearance of the prepared medium: Light yellow colour, clear to slightly opalescent gel

pH (at 25°C): 7.4 ± 0.2

CULTURE RESPONSE

Cultural characteristics observed after incubation at 37 ± 2°C for 18-48 hours.

Organism	ATCC	Inoculum (CFU/ml)	Growth	Recovery
Escherichia coli	25922	50 - 100	Good - Luxuriant	≥ 70%
Pseudomonas aeruginosa	27853	50 – 100	Good - Luxuriant	≥ 70%
Salmonella Typhi	6539	50 – 100	Good - Luxuriant	≥ 70%
Staphylococcus aureus	25923	50 – 100	Good - Luxuriant	≥ 70%
Streptococcus pyogenes	19615	50 - 100	Good - Luxuriant	≥ 70%

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

REFERENCES

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
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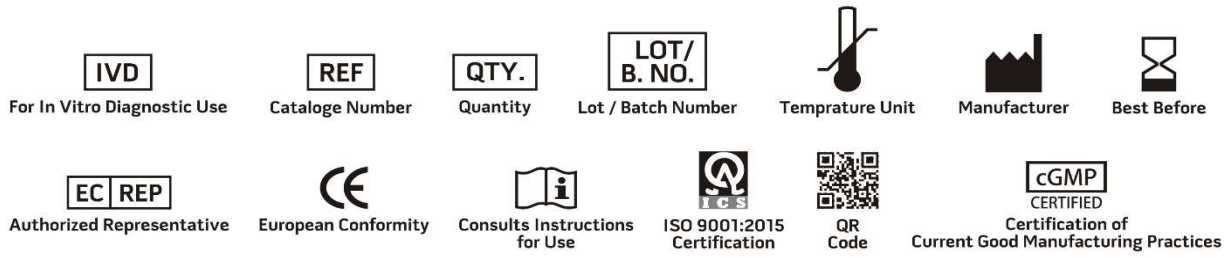
3. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.

5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock. D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
6. Lapage S., Shelton J. and Mitchell T., 1970, Methods in Microbiology', Norris J. and Ribbons D., (Eds.), Vol. 3A, Academic Press, London.
7. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore.
8. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.